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Communicating Contraception: Social Science and the Politics of Population Control in Cold War India

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Abstract

This dissertation analyzes archival materials to examine the relationship between reproductive governance in India and the political and scientific dynamics of the Cold War. In 1952, India became the first country to institute anti-natalist population control as a national policy goal, concentrating its efforts on female sterilization and the building of medical family planning clinics. Beginning in the 1960s, however, the state launched a series of mass communications campaigns on family planning and contraception targeted at men. While prior scholarship glosses over these campaigns as mere accompaniments to its medical efforts, the dissertation argues that they represented a radical transformation of reproductive control in response to Cold War-era social science. Furthermore, it shows how this shift in approach transformed a largely medicalized program focused on the bodies of women into a simultaneously ideological endeavor to influence the reproductive decisions of men. The dissertation makes three primary contributions to sociological scholarship on reproductive governance. First, in contrast to explanations of reproductive governance that center on national factors, the dissertation demonstrates the influence of global political and scientific dynamics on reproductive control. Relatedly, while prior scholarship understands the postwar institutionalization of population control as largely a response to concerns over economic growth measured in quantitative terms, the dissertation argues that it was also driven by social scientists' anxieties over the viability of capitalist democracy. Finally, prior scholarship on reproductive control centers on the medicalized and biomedicalized management of women's bodies, which leaves little room for understanding the erstwhile control of men's reproduction in India. Expanding this literature, I show how, in the Indian case, social scientists' framing of reproductive control in psychosocial and behavioralist terms allowed men to be imagined as germane targets of fertility regulation.

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List of Abbreviations

AIR	All India Radio
BSP	Behavioral Sciences Program (Ford Foundation)
CASBS	Center for Advanced Study in the Behavioral Sciences
CFPB	Central Family Planning Board
CFPI	Central Family Planning Institute
CFSC	Chicago Family Study Center (University of Chicago)
CPC	Communist Party of China
DAVP	Directorate of Audio-visual Publicity
DGHS	Director General of Health Services (Indian Ministry of Health)
DTRC	Demographic Training and Research Center
FPAI	Family Planning Association of India
FPCAR	Family planning communication action research
IADP	Intensive Agricultural District Program
ISRO	Indian Space Research Organization
IPPF	International Planned Parenthood Federation
IUD	Intrauterine device
KMT	Kuomintang
NAI	National Archives of India
NAM	Non-Aligned Movement
NMML	Nehru Memorial Museum and Library
NPC	National Planning Committee
OPR	Office of Population Research (Princeton University)

PAA	Population Association of America
PPFA	Planned Parenthood Federation of America
RAC	Rockefeller Archives Center
SITE	Satellite Instructional Television Experiment
SSRC	Social Science Research Council
UN	United Nations
USAID	United States Agency for International Development

For Kevin, Twisha, Pamela, and Bala

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CHAPTER 1

Introduction

1.1. Population Control and the Science of Family Planning in Cold War India

In the winter of 1970, Everett Rogers found himself at a cocktail party in New Delhi alongside a number of Indian government officials. Rogers—a sociologist in the Department of Mass Communications at Michigan State University, one of the first doctoral degree-granting communication sciences programs in the United States—was in India on a Ford Foundation travel-study grant to observe family planning programs in the country, as well as supervise his own experiment on whether broadcasting information about new agricultural technologies increased their adoption within farming communities. An official approached him at the party, suggesting that he write a comprehensive book on how disseminating information about family planning could similarly increase people's acceptance of birth control and the virtues of nuclear families, and thereby allow India to combat its rapidly rising population growth rates (Rogers 1973).

The official's appeal was not out of place. At the time, Rogers was widely considered one of the most senior researchers in the field of "development communications," a fact that highlights how nascent the field was given that he was only thirty-seven years old. Having begun his career at Iowa State University and Ohio State University researching what he termed the "diffusion of innovations," his primary experience involved studying how farmers in the American Midwest and the developing world could be persuaded to adopt agricultural innovations and improve their crop yields. The theory of diffusion proposed that people were more likely to "adopt" innovations in technology—or, put otherwise, that innovations were more likely to "diffuse" among potential users—when information about the innovation in question

was communicated to them in particular ways. Despite the relative newness of development communications as a field, American communication scientists in general had begun to consider their work as foundational to understanding how the discipline could extend its insights into the "problem" of underdevelopment in low-income countries (Bah 2008; Gilman 2004; Shah 2011).

In the book that eventually resulted from his trip to India, *Communication Strategies For Family Planning,* Rogers wrote that he had to carefully mull the official's suggestion over. In fact, not long before that interaction, others had also implored him to turn his academic attentions towards family planning research and contribute to the growing movement to stem "overpopulation" in low-income and decolonizing countries. Bernard Berelson, a public opinion researcher and Vice-President of a research organization known as the Population Council, had brought family planning to Rogers' attention at Berelson's New York headquarters in 1962. Davidson Gwatkin, a Ford Foundation program officer on population studies, had done the same in 1969. Given his narrow expertise in the domain of agricultural modernization and concurrent involvement in a large international study of agricultural technology diffusion in India, Nigeria, and Brazil, Rogers did not feel comfortable venturing into family planning research at the time.

Yet, Rogers' counterparts in American demography and economics had begun to advocate that "direct interventions" into fertility control were necessary if developing countries were to secure their citizens' economic wellbeing. Before World War II, on the other hand, they were more likely to advocate industrialization and the modernization of agriculture as first steps towards "modernity," stating that these two processes would automatically lead to population stabilization and mirror what they had termed the "demographic transition" in Europe. Their rapid switch towards emphasizing active fertility reduction to combat the threat of overpopulation, as opposed to merely waiting for population stabilization to follow

industrialization and agricultural modernization, indicated a radically different approach to development—one that depended primarily, if not more, on the diffusion of birth control information and adoption of contraceptive technologies. By the end of his trip to India, Rogers, who was plugged into scholarly networks studying development, began to understand why others were so doggedly pursuing the subject of family planning research with him. He would spend the next three decades studying whether and how communicating information about family planning and new contraceptive technologies to people in developing countries could persuade them to change their reproductive behaviors and, in the process, lead their countries towards greater economic growth.

Rogers, however, was not alone. His foray into family planning research exemplified broader developments in the social sciences that were occurring around him. Unlike their natural science counterparts, communication scientists like Rogers sought to understand the social, economic, and psychological contours of human fertility. Their approaches to the issue fell primarily under the rubric of *behavioralism,* a relatively new theoretical paradigm that gained institutional traction in the 1940s and 1950s and saw human activity, social phenomena, and social change as outcomes of shifts in human behavior, the latter of which was defined in social psychological terms (Pooley 2016; Seybold 1980; Solovey 2013). In contrast to their medical and biomedical contemporaries, communications scholars argued that reproduction was not only a biological phenomenon but also a cognitive one: one that involved beliefs, norms, attitudes, and processes of decision-making. In turn, they argued that solving the problem of overpopulation was less a matter of developing the perfect contraceptive but more fundamentally a matter of changing deeply held norms about reproduction that prevented people from using contraception in the first place.

At the same time, communication scientists justified these arguments in broader geopolitical terms, asserting that small nuclear families that believed that reproduction could be manipulated for economic security were the building blocks of capitalist democratic society. According to them, securing the "small nuclear family norm" in the global South was going to be central to securing the place of capitalist democracy in an escalating global Cold War. In turn, they argued that achieving such ideational and normative change was only possible through the strategic use of persuasive mass communications, thereby framing population control as a battle for "hearts and minds." Under the influence of communications research on family planning, the Indian state's family planning and population control program changed dramatically in the early 1960s, moving to incorporate mass communications strategies to convince its citizens of the apparent benefits of small nuclear families and planned conception, as well as encourage them to engage in contraception.

"Communicating Contraception: Social Science and the Politics of Population Control in Cold War India" examines the relationship between reproductive governance in India and the political and scientific dynamics of the Cold War. In 1952, India became the first country to institute anti-natalist population control as a national policy goal, concentrating its efforts on female sterilization and the building of medical family planning clinics. Beginning in the 1960s, however, the state launched a series of mass communications campaigns on family planning and contraception targeted at men (Vicziany 1982). While prior scholarship glosses over these campaigns as mere accompaniments to its medical efforts, my dissertation argues that they represented a radical transformation of reproductive control in response to Cold War-era social science. Specifically, I contend that they reflected American social scientific models of psychosocial management that envisioned behavior control as a means of spurring democratic

modernization in the face of communist expansion. Furthermore, I show how this shift in approach transformed a largely medicalized program focused on the bodies of women into a simultaneously ideological endeavor to influence the reproductive decisions of men.

The dissertation makes three primary contributions to sociological scholarship on reproductive governance. First, in contrast to explanations of reproductive governance that center on national factors, the dissertation demonstrates the influence of global political and scientific dynamics on reproductive control. The Indian state's turn towards the psychosocial management of reproduction can be understood as a function of how American social scientists intended to become bulwarks against communism by embedding their research in postcolonial institutions in a bid to create "modern" families. Relatedly, while prior scholarship understands the postwar institutionalization of population control as largely a response to concerns over economic growth measured in quantitative terms, I argue that it was also driven by social scientists' anxieties over the viability of capitalist democracy in a new world order. Vice versa, my analysis illustrates the centrality of gender and reproductive regulation to postwar global politics, highlighting how the Cold War was also waged through expert-driven interventions into quotidian gender relations, bodies, and familial institutions in the non-aligned world. To American communications experts, crafting citizenries that made "rational" reproductive decisions and valued the act of "planning" would encourage capitalist democratization—thus operating as a reminder of the relevance of American social science and reproductive governance to U.S. foreign interests. Finally, prior scholarship too often assumes that reproductive control centers on the medicalized and biomedicalized management of women's bodies, which leaves little room for understanding the erstwhile control of men's reproduction in India. Expanding this literature, I show how, in the

Indian case, social scientists' framing of reproductive control in psychosocial and behavioralist terms allowed men to be imagined as germane targets of fertility regulation.

1.2. The Geopolitics of Reproductive Governance

Reproduction has historically been a fundamental object of regulation for the modern nation-state (Murphy 2012). Building on the Foucauldian concept of biopolitics, Morgan and Roberts (2012) conceptualize the role of reproduction in statecraft through the term "reproductive governance," defining it as "the mechanisms through which different historical configurations of actors – such as state institutions, churches, donor agencies, and non-governmental organizations – use legislative controls, economic inducements, moral injunctions, direct coercion, and ethical incitements to produce, monitor, and control reproductive behaviors and practices" (2012:243).

Scholarship on reproductive governance has dwelled on how domestic actors and institutions have attempted to regulate reproduction within national borders (Alexander 1994; Georges 2008; Jolly and Ram 2001; Kanaaneh 2002; Kim-Puri 2005; Kligman 1998; Korolczuk 2016; Leibler 2014; Nadkarni 2014; Nagel 2000; Roberts 1997; Walby 2006; Yuval-Davis 1996). In doing so, it has elucidated how nation-states link "intimate governance" to national governance, inducing citizens to ensure that their reproductive actions help constitute a morally, economically, and politically desirable body politic, and to expect sanctions otherwise (Bashford 2007; Kanaaneh 2002). In many ways, the tendency of this scholarship view reproductive governance as a set of domestic processes is warranted (Wimmer and Glick Schiller 2003). After all, efforts to monitor and intervene in citizens' reproduction have historically depended on government-authorized policies and proceeded under the aegis of institutionally sanctioned

domestic experts. Furthermore, as scholars of "stratified reproduction" have shown, reproduction continues to undergird how the boundaries of nationhood and belonging are drawn and legitimized as citizens and governments debate which people are to be included in and excluded from the national body politic and which bodies, therefore, are encouraged to reproduce (Kanaaneh 2002; Mamo and Alston-Stepnitz 2014; Roberts 1997).

There are two implications of a nation-oriented-state framework for studies of reproductive governance. First, this framework assumes that reproduction is primarily, if not solely, governed by those with official power to do so: state institutions, domestic scientific experts, and other kinds of domestic non-governmental organizations tasked with monitoring and intervening in reproduction within national borders. Relatedly, it paints reproduction as a phenomenon that reflects, above all, the relationship between "citizens" and the "nation-state." Governing reproduction, therefore, appears as the exclusive province of nation-states and other domestic actors with investments in nation-states' capacity for such governance. Under this view of reproduction, reproductive governance is seen to matter sociologically only insofar as it reflects states' polyvalent interests in surveilling reproduction to fulfill national political and social goals.

Prior social scientific scholarship on the politics of population control and family planning in India has followed this "methodologically nationalist" (Wimmer and Glick Schiller 2003) trajectory. The bulk of this scholarship has restricted its analyses to domestic actors and institutions in India, including the central and state governments, non-governmental organizations, domestic scientific experts, and lay citizens (Chatterjee and Riley 2001; Desai 1998; Jeffery and Jeffery 1997; Rao 2004; Ram 2001). As a result, this scholarship has attributed key shifts in the nature and scope of the program to the efforts of Indian state institutions and

domestic non-governmental organizations, with scarce reference to international and foreign factors. This is evident in the extent and nature of the attention scholars have paid to the emergence of the extension approach in the Indian program (Chatterjee and Riley 2001; Rao 2004; Gandhi and Shah 1992). At best, this shift in understood as a concerted endeavor on the part of the Indian state to render family planning more favorable to Indian citizens and, thus, as a "natural" or inevitable form of the kinds of state-authored advertising commonly used in public health programs; at worst, it is left unexamined. In addition, analyses of the impact of the Indian program on the production of cultural meaning similarly restrict themselves to discussions of how the program mediates the relationship between the Indian nation-state and its citizens. Here, the scholarly focus has centered on the family planning program as a conduit for the Indian state's nationalist aspirations, filtered through the prism of gender, modernity, and the family (Chatterjee and Riley 2001; Ram 2001). In both cases, the assumption is that qualitative changes in attempts to monitor and direct Indian citizens' reproduction have resulted largely from the efforts of domestic actors.

Sociologists and social scientists, however, are now beginning to analyze the global and transnational contours of reproductive governance in order to understand how international political shifts since World War II have molded reproduction into a global concern. These transformations include the emergence of new international relationships oriented around "international development," wherein Western democratic states and low-income, non Western countries became tied together through novel aid flows and strategic agreements centered on helping the latter achieve particular economic, social, and political goals while aiding the former in their own projects of global governance (Cullather 2010; Engerman et al. 2003; Ferguson 1990; Gupta 1998; Hecht 2011; Immerwahr 2014; Latham 2010; Mitchell 2002; Murphy 2017;

Westad 2005). The postwar period also witnessed the rise of new international institutions and intergovernmental regulatory and security agencies, such as the United Nations (UN) and the World Bank, tasked by government leaders and scientific experts with "standardizing" international development and security (Alacevich 2009; Seidl 2007). Moreover, the immediate postwar period between 1945 and 1965 was characterized by the rise of wealthy, and often American, private foundations, such as the Ford Foundation, Carnegie Corporation, and the Rockefeller Foundation, which sought to seize the reins of knowledge production on particular international development issues when international institutions and Western governments were unwilling to address them (Arnove 1980; Parmar 2012; Seybold 1980). Finally, the acceleration of globalization itself in the postwar period, with its consequences for the transnational movement of bodies, knowledge, and material resources, has greatly affected the extent to which nation-states have come under pressure from their foreign peers and international institutions to regulate their citizens, societies, and economies in particular ways.

Against the backdrop of these global transformations, it has become increasingly untenable to analyze reproductive governance in the geographically insular terms of national citizenship and the nation-state. Consequently, the assumption that reproductive governance is primarily, if not solely, a matter of domestic political concern has come under scrutiny. Scholars of reproductive governance are gradually turning their analytical attention to the influence of global and international actors and institutions on an ostensibly domestic phenomenon (Browner and Sargent 2011; Solinger and Nakachi 2016). Recent scholarship on the international contours of reproductive regulation includes studies of transnational markets for adoption, gestational surrogacy, and reproductive tissues and technologies (Choy 2013; Cooper and Waldby 2014; Dorow 2006; Oh 2015; Pande 2014; Rudrappa 2015; Vora 2015), the politics of motherhood,

maternal mortality, and international standards on maternal health, as well as the ways in which they legitimize the surveillance of the reproductive body in the name of international development (Suh 2015, 2018), the role of gender and gendered meaning in reproductive governance and the development of reproductive technologies (Gutmann 2007; Oudshoorn 2003), and the institutionalization of "global reproductive health," population control, and global fertility limitation as international development issues (McCann 2016; Murphy 2017; Takeshita 2011).

Taken together, this scholarship shows that while reproduction continues to underwrite how relationships between citizens and the nation-state are constituted and given meaning, governing reproduction in a postwar world has become an issue of significant *global* concern, implicating globally situated actors with distinct rationales for their investments in reproductive regulation. When attending to the influence of global and international forces in domestic reproductive regulation, it becomes evident that reproductive governance cannot be reduced to the efforts of national elites and divorced from the international and global contexts in which domestic actors of all kinds have increasingly operated for the past half-century. For example, studies of transnational markets for adoption, surrogacy, and reproductive technologies and biomaterials highlight how lay citizens, private industries, and consumers have developed complementary and, at times, contradictory interests in how reproduction and reproductive processes are regulated in foreign and international contexts across the global South and global North (Cooper and Waldby 2014; Dorow 2006; Oh 2015; Pande 2014). Likewise, states and international institutions have also developed interests in how reproduction is regulated beyond national borders. Scholars see this influence in how global reproductive "problems" have been created and legitimized, including overpopulation, maternal health and mortality, and

contraceptive accessibility, wherein the capacity to "solve" such problems is seen as a marker of a country's development and, thus, is subject to international scrutiny (Béhague 2017; Briggs 2002; Connelly 2008; Murphy 2017; Storeng and Béhague 2016, 2017; Suh 2015, 2018). Furthermore, transnational networks of credentialed scientific experts, including demographers, physicians, and biomedical researchers, have often been the central architects of global reproductive governance and primary defenders of international mobilization on the issue (Connelly 2006, 2008; McCann 2016; Takeshita 2011). Not only have scientific experts erected transnational institutional enclaves for knowledge-production on reproduction but also consulted with national elites, policymakers, activists, and non-governmental organizations on how to best govern reproduction (Chesler 1992; Connelly 2008).

Scholarship has only recently begun to analyze the impact of global and international actors and contexts on the history of reproductive governance in postcolonial India, particularly with regard to population and family planning, two of the most visible and well funded efforts to regulate Indian citizens' reproductive lives after Indian independence in 1947. Led by historians, this work has focused predominantly on how population limitation in India was justified and shaped politically by domestic and non-domestic actors working in transnational contexts (Connelly 2006, 2008; Hodges 2004, 2008; McCann 2016; Williams 2014). Matthew Connelly (2008) centers his sweeping history of the global population control movement on the actions of high-status political leaders, policymakers, experts, activists, and voluntary organizations from India and a slew of Western countries, elucidating how these actors collectively cast national population limitation as a central goal for the newly independent nation-state. In a related vein, Hodges (2004, 2008) traces how the battle against overpopulation in postcolonial India drew on yet reframed colonial discourses on population growth in the country. Finally, Carole McCann

(2016) and Rebecca Williams (2014) turn their attention to the role of Western experts in demography and public health in legitimizing population control, and the ways in which they characterized India as an exemplary site for this endeavor. Yet, while extant historical research has pointed to the global contexts in which population control in India was conceived of and justified, they give short shrift to how these actors shaped the nature and trajectory of the program, in close concert with their Indian counterparts, long after the program began in 1952 (Bashford 2007, 2014; Connelly 2006, 2008; Hodges 2004; Tarlo 1995; Williams 2014).

Building on this promising research agenda, this dissertation sheds light on those global and international forces that, alongside domestic actors, shaped how the Indian program was implemented on the ground. It thus argues that the *practice* of population control in India was also a product of technoscientific exchanges among domestic and foreign actors, the latter of which had distinct interests in how reproduction and fertility were going to be regulated in India. The dissertation thereby expands the analytical focus from the point at which population control was broadly legitimized in India to the specific ways in which was carried out. Doing so reveals how global influences on Indian population control stretched far beyond its founding to mold the technoscientific bases of its programmatic characteristics.

My explanation of these exchanges centers on how the Indian program moved from the clinic approach of the 1950s to the extension approach of the 1960s and 1970s. In contrast to assumptions in prior scholarship, I argue that this shift was not the inevitable outcome of Indian population policymakers' attempts to guarantee the program's success. Instead, I show how the inauguration of the extension approach resulted from the institutionalization of American social scientific expertise—specifically, the interdisciplinary study of mass communication—in the Indian population policymaking and research arena. Indeed, although both Indian policymakers

and American demographers collectively perceived the clinic approach as “failing” to bring about reductions in birth rates, the former initially began to offer economic and monetary incentives to enjoin citizens to opt for permanent sterilization, under the view that this would accelerate the program’s effectiveness. On the other hand, American demographers turned to the study of mass communication to provide alternative technoscientific solutions to the perceived failures of the clinic approach. According to American communications experts, persuasive communications on the virtues of smaller families would lead to normative changes in public opinion and attitudes about reproduction, which would, in turn, increase citizens’ psychological motivation to use contraception. Importantly, however, American social scientists’ efforts to impress these ideas on Indian policymakers were aided by the presence of private American foundations in the country, notably the Ford Foundation, and their tradition of employing American social science experts, particularly those with training in agricultural extension and communication, as their representatives in the “field” to oversee and direct their development initiatives. Not only were these representatives sympathetic to communications perspectives; they had also stitched themselves into the fabric of Indian government policymaking in a bid to infuse American social scientific expertise into the policymaking process. As a result, when American population researchers initiated discussions on the application of mass communications in the Indian population control program, foundation representatives used their prior expertise and institutional influence to ensure that Indian policymakers and bureaucrats entertained that prospect. Working alongside the latter, they expanded the scope and nature of the program by launching new research agendas on family planning communications in Indian social science institutes, assisting the central and state governments of India in the creation of a range of new extension programs, helping to create new government institutions to oversee and

evaluate family planning extension work, and funding the training of Indian graduate students in American mass communications and demography.

At the same time, my analysis reveals that the shift towards family planning extension in India reflected American experts' attempts to secure what they believed were the behavioral conditions for capitalist democratization and stave off the potential for communist economic and political philosophies to take root. They asserted that the extension approach would not only help reduce birth rates by motivating Indians to use contraception—a paramount goal for Indian population policymakers, economic planners, and political leaders—but also create the kinds of people that would "behave" as ideal members of capitalist democracies, which remained a primary aim for American foreign policy elites, academics, and private research donors. In communications experts' views, small nuclear families that believed in "planning" their actions, enhancing their material and economic "achievement," and manipulating their life conditions to do so were the social building blocks of modern societies—where "modern" operated as shorthand for both "capitalist" and "democratic." Thus, the shift to family planning extension was not only tethered to technoscientific debates about reforming the clinic approach and assisting India to stay its course towards population limitation—it also, and perhaps more crucially, appeared as a way to preemptively engineer entire political economies in the midst of an escalating Cold War that reached into all corners of the globe (Hecht 2011; Westad 2005).

Uncovering the decisive interests of American experts and foundation officials in family planning extension in India situates reproductive governance in the broader historical context of international relations during the Cold War, while underscoring the various ways in which technoscience was marshaled to achieve various international political objectives (Cullather 2010; Hecht 2011; Immerwahr 2014; Oreskes and Krige 2014). The history of the extension

approach shows that the science and implementation of population control in India was organized as much by global geopolitical struggles as nationalist aspirations and instrumental goals for quantitative population limitation—struggles in which American experts cast the molding of Indian citizens' beliefs about sex, reproduction, and the family as an indispensable behavioral technique for "winning hearts and minds" (Gilman 2004).

As such, the Indian case is evidence for what Alison Bashford (2007, 2014) has termed the "geopolitics" of reproductive governance and population management. In her analysis of international debates on overpopulation in the interwar period, Bashford finds that these discussions were driven more by concerns over the spatial organization of the world's increasing population than exclusively biopolitical concerns over controlling biological reproduction, and that attempts to divine solutions to the issue thus hinged on international land redistribution and immigration rather than the medical and biomedical control of sex and fertility. Bashford, however, uses the term "geopolitics" in the classical sense to refer to international struggles over spatial and geographic resources—a framework that she acknowledges had as much to do with the territorial terms in which these struggles over global power were understood during the interwar period as her own analytical outlook (2007:188-189). In contrast, I employ the term in its more expansive sense to denote the politics of international relations more broadly since World War II, wherein understandings of global power have come to rely less on territorial control than on political economic, scientific, and ideological influence. As a result, contra Bashford, who draws a distinction between the "geo" and the "bio," my analysis of the Indian case shows that, in the Cold War-era science and practice of family planning extension, international struggles over global power were inextricably linked with biopolitical efforts to govern sex, gender, and fertility.

1.3. Debating the "Right Tool" for the "Job": Science, Social Worlds, and the Construction of Technosocial Problems

A central question in this dissertation is how mass communications came to supplant contraceptive technology as the "first line" of defense against overpopulation in India in the 1960s. While contraception was still viewed as necessary technical means for curtailing pregnancy at the level of physiological conception, Indian state actors—in particular, the Indian Planning Commission and a number of high-profile family planning policymakers—came to regard it as insufficient for stimulating large-scale decreases in population growth rates, turning to mass communications, instead, to solve the issue.

To answer this question, I turn to insights from science and technology studies (STS) on the construction of technosocial "problems" (Fujimura 1987; Casper and Clarke 1998; Clarke 1998; Clarke and Fujimura 1992; Clarke and Star 2008). STS scholarship has shown that the process of exploring technoscientific solutions to collectively defined social problems—that is, finding the "right tool" for the "job"—is neither straightforward nor obvious, but shaped by contingencies in the *practice* of scientific work. Technoscientific interventions into social problems are fielded, accepted, or rejected not because they are effective or ineffective in an *objective* sense or because the science behind those interventions is "better" or "worse." Rather, as STS scholars highlight, the very criteria for defining what counts as an effective solution to a problem in the first place are the products of scientific contestation and situated practice (Pinch and Bijker 1984). In other words, the effectiveness of a particular solution to a social problem—or as Clarke and Fujimura (1992) term it, the "rightness" of the tool for the job at hand—is not located in the design or nature of the technoscientific artifact in question, but rather in how

relevant scientific actors make sense of what the problem is, what an adequate response to it looks like, and whether and how they can bring their expertise to bear on it.

To make a particular scientific task "doable" and the larger problem to which it is related "solvable," credentialed experts often attempt to align their research practices, sites of research practice, and broader fiscal, scientific, and political agendas so that asking and answering the research questions at hand can become more feasible (Fujimura 1987; Clarke and Fujimura 1992). Moreover, these alignments often have to be reengineered in the course of answering those questions as the material and social conditions for scientific work shift, as extra-scientific interests in the resolution of the issue wax or wane, and as unexpected events and results transform both the definition of the problem and methodological practices for research into the problem. At other times, however, these alignments can become institutionalized over time so that alternative courses of scientific action are closed off, certain technoscientific materials, theories, and conceptual frameworks become established resources in methodological and analytical processes, and particular forms of scientific labor become immutable parts of those processes (Casper and Clarke 1998).

Furthermore, it is not only *how* technosocial problems become made doable but also *why* that shapes contestations over their solutions. Credentialed experts can have various rationales for constructing "doable" scientific jobs in the service of solving these problems. At times, scientists can choose to devote their attention to certain collectively defined problems to increase the legitimacy of their discipline or field of study in the face of controversy around the scope and character of their work (Clarke 1998; Greenhalgh 1996). Here, scientists hope that the social and political importance accorded to the problem in question will allow them to both court greater resources and command more attention for their work, which, in turn, are expected to transfer

necessary prestige and authority to their fields. At other times, making a problem more doable can operate as a setting for jurisdictional battles, as scientists from distinct disciplinary and expert backgrounds wrestle for professional authority to define the problem and divine solutions to it (Abbott 1988). Finally, increasing the doability of a scientific task that directly bears on the capacity to solve a technosocial problem can widen the existing base of interest in the products of scientific research—such as theories, technologies, and other kinds of sociotechnical applications—and create new markets for those products. Here, experts can often attempt to "enroll" relevant social and political actors who are already invested in the problem them into new ways of thinking about and addressing it (Callon 1984).

As this dissertation shows, in the first half of the twentieth century global and national overpopulation were framed as technosocial "problems" that needed solving. Likewise, population *control*—the act of directly intervening in the problem of overpopulation—had become a social, scientific, and political "job" that needed successful doing. Expert-led deliberations on the issue sought to conjure effective means for intervention and define the criteria by which such effectiveness was going to be defined and evaluated. In line with prior STS scholarship, I argue that making the job of population control more doable was not a straightforward or inevitable process. On the contrary, it involved aligning and realigning scientific research methods and frameworks with the interests of research donors and the exigencies of favored research sites; reframing theoretical foundations in disciplinary thought about the causes and consequences of population dynamics; creating new work arrangements within and across disciplinary contexts; and courting new forms and sources of research funding.

Chapter 2 highlights that for much of the first three decades of the global population control movement, the most vocal scientific experts in favor of population limitation looked to

formal law and macroeconomic processes rather than technoscience *per se* for effective interventions into overpopulation. Led predominantly by American demographers and a handful of economists, statisticians, and biologists across the United States, Western Europe, and Asia, these experts set store during this period by international treaties on land redistribution from wealthier and more sparsely population regions to lower-income and more densely populated regions, relaxed national migration policies, and industrialization and urbanization to bring about decreases in fertility rates (Bashford 2014). On the other hand, while birth control advocates, neo-Malthusian groups, and biologists advocated on behalf of contraceptive technology, it was yet to gain any ground as a salutary measure in great part due to its social and scientific illegitimacy during the interwar period.

It was only after a series of international political shifts after World War II, including widespread decolonization and the beginnings of a global Cold War, as well as key developments in extra-university funding for demographic and contraceptive research, such as the rise of philanthropic and private foundation donors, that demographers began to cast "direct" interventions into fertility at the physiological level as a necessary solution to overpopulation. This argument hinged on the redefinition of the problem itself from one that was concerned with the "qualitative" composition of a rapidly changing world population to one that was concerned with the "quantitative" rates at which it grew and the implications of that growth. To do so, they worked with macroeconomists to define population size as a predictor of national economic productivity. The new argument about direct approaches to fertility control was also based on demographers' reframing of "demographic transition theory"—a key conceptual framework in the discipline—and their attempts to align its implications with American foreign policy aims to combat communism across the postcolonial world. In the process, demographers were able to

signal their political relevance as a discipline, secure much-needed institutional and academic legitimacy, and procure funds for their research from a host of American private foundations and wealthy philanthropists with shared convictions in using social science to promote capitalist democratization around the world. The new argument was also made possible through demographers' attempts to *predict* future population dynamics through the use of simulation studies rather than merely provide causal, historical explanations of population trends using statistical census data as they had generally done until then. The advent of simulation studies in demography—or what Dennis Hodgson (1983) has referred to as its "futures research" tradition—thus allowed demographers to experimentally model the effects of various technoscientific interventions into population growth rates, in particular the state-led promotion of contraceptive technologies. In response to this new argument, Indian policymakers and political proceeded to augment the country's existing family planning clinics, increase their supply of mechanical and topical contraceptives, and train physicians and nurses in surgical contraceptive procedures.

Still, from World War II until the early 1950s, social scientific experts viewed overpopulation as a problem they had the scientific tools to "diagnose" on their own but not "treat": while they considered *population* as a relevant object of study in their disciplines, they were yet to view population *control* in the same terms, leaving the latter up to physicians and medical and biomedical researchers in the reproductive sciences. Increasing contraceptive access and promoting the development of technically more sophisticated contraceptive technologies went unquestioned as the right tool for the job of population control until the late 1950s and early 1960s. As Chapters 3 and 4 show, during this time period Indian census data showed that the country was not meeting its population reduction goals quickly enough. As a result, when the

country's medicalized clinic approach to the problem came under scrutiny, American demographers began to turn to an alternative group of social scientific experts—social and behavioral scientists of mass communication and mass media—to ascertain how and why this approach was "failing" to work.

Importantly, these alignments were facilitated by the extent to which various actors in population control research and advocacy communities overlapped. These actors included the worlds of private foundations and philanthropic funding, academic social science, and international networks of population control policymakers and experts. Here, I draw on the STS concept of "social worlds" to make sense of how population control advocates' emphasis on biomedical and medical interventions centered on contraceptive technologies and clinics transmuted into interests in behavioral and psychosocial ones centered on mass communications techniques and mass media technologies (Clarke 1998:15). According to Clarke (1998), social worlds are "communities of practice and discourse." Reconciling the core tenets of institutionalist and symbolic interactionist schools of thought, scholars of social worlds theory define them as the "building block of collective action." Social worlds can be made up of various types of actors and organizations who report particular "commitments" to being a part of those worlds, are involved in "group work" and deliberations over issues in which those communities are invested, and act on the basis of shared meanings. When it comes to collectively defined technosocial problems, multiple social worlds can be productively analyzed as inhabiting "arenas" of mutual concern and action where the issues at hand are "debated, negotiated, fought out, forced and manipulated" and various participating actors attempt to "translate" those issues into ones with which other actors will find common cause (Strauss 1978:124, as cited in Clarke 1998:14; Callon 1984). The social worlds framework has been critical to studies of disciplinary

formation (Clarke 1998; Shostak 2003, 2005), scientific controversies (Christensen and Casper 2000; Clarke 1990), and the implementation of technoscience to social problems (Baszanger 1998).

The social worlds and arenas approach can be especially helpful in analyzing how debates over the "right tools for the job" are organized and resolved when the professional jurisdiction over the job at stake is uncertain or not firmly established, as was the case in the arena of twentieth-century population control. By attending to how multiple relevant actors in an arena of mutual concern make sense of their relationship to a problem, the approach highlights how the very search for professional jurisdiction over diagnosing or treating a problem itself can guide actors' engagement with it, as well as the political stakes inherent in the process by which distinct technoscientific interventions are recommended, evaluated, accepted or discarded. On the other hand, claiming professional jurisdiction might not always be the primary guiding rationale behind deliberations over the right tools for a scientific job. As the "new" sociology of expertise has shown (Clarke and Star 2008; Eyal 2013), viewing these deliberations primarily as battles over scientific authority further assumes strict boundaries among disciplines or fields of study and does not permit an understanding how scientific cooperation can occur without consensus over the meanings that actors attribute to the problem. Doing so also takes for granted that experts in one field will not be reliant on, or find useful, knowledge that is produced in an alternate field. Instead, attending to how engagements among variously situated actors extend the capacity of the expert *network* to address and perform the scientific task at hand demonstrates the usefulness of the social worlds approach, especially when participating actors do not claim to want exclusive jurisdiction over the task and when different sets of expertise are implicated in the "doability" of the task.

During the 1950s and 1960s, the communication sciences constituted an important social world in the midcentury social sciences that shared members and borders with other relevant worlds in the population control arena, both in the United States and India. These included private research donors, American university social science departments, biomedical and medical experts, and policymaking elites in India. A handful of emerging communication scientists had been trained in both demography and the study of mass communication, whereas some occupied positions of power in important funding organizations for the social sciences and population control research at the time, such as the Population Council and the Ford Foundation. These experts reframed the issue of population control yet again, arguing that population control was more fundamentally a matter of changing public opinion about reproduction, sex, and contraception and that contraceptive technologies alone were insufficient to produce these large-scale psychological changes deemed necessary to their adoption.

In many ways, communications scientists operated as social world "entrepreneurs" (Clarke and Star 2008), who, as a consequence of inhabiting multiple and intersecting social worlds, were able to enroll their respective colleagues into adopting their particular vision of the problem and its solutions. During the late 1950s and early 1960s, this argument shifted the biomedical bent of debates on overpopulation, sparking interest in behavioral and social scientific techniques for inculcating the "small family norm" among people in rapidly populating regions. The field of study that coalesced around this new argument was known as "family planning communications. Family planning communications was composed primarily of demographers but also included other sociologists and interdisciplinary scholars of mass communication with training in agricultural extension research and the political science of public opinion. In response to communication scientists' arguments, demographers began to adopt

behavioral scientific theories on and methodological approaches in order to understand cognitive decision-making and attitudes on reproduction and fertility, as well as emphasize research questions on the practical applications of mass communication in changing these decisions and attitudes. These new frameworks made the micro-level dynamics of "family planning" into a central disciplinary concern while, in the process, converting survey and experimental research on family planning behaviors into core methodological approaches.

As a result, by the turn of the 1950s, demographers believed that their discipline could not only promise accurate "diagnoses" of overpopulation and its political economic fallout, but also suggest effective "treatments." These significant transformations in scientific thought and practice eventually encouraged Indian policymakers to expand their previous emphasis on augmenting family planning clinics and increasing contraceptive accessibility and focus on the strategic use of mass communications and mass media technologies to transform public opinion on sex, reproduction, and the family among Indian citizens.

1.4. Gendered Technoscience and Reproductive Regulation: Men, Masculinity, and the Construction of Contraceptive Subjects

This dissertation is primarily concerned with understanding reproductive governance and how it is given meaning and legitimized. Feminist social science scholarship links the emergence of reproductive governance as a form of social control and transformation to two primary processes—medicalization and biomedicalization—both of which have depended to a great extent on the implementation of what Clarke (1998) terms the "technosciences of reproduction" (Clarke 1998; Clarke et al. 2003; Conrad 1992; Conrad and Waggoner 2014; Riessman 1983; Riska 2010). As the medicalization of deviance gave way historically to the medicalization of

"everyday life," the process of reproduction—previously considered "natural" and mundane—became increasingly subject to the jurisdiction of medical authorities and a site for medical intervention and scrutiny (Conrad and Waggoner 2014; Rosenfeld and Faircloth 2006). Relatedly, scholarship has analyzed the "biomedicalization" of reproductive governance, which reflects the emergence of governmental discourses that persuade people to view reproduction as a matter of self-management and personal responsibility (Bharadwaj 2016; Clarke et al. 2003; Murphy 2012; Erol 2016; Riska 2010). Scholarship on the medicalization and biomedicalization of reproductive governance has, in particular, elucidated how nation-states link "intimate governance" to national governance, inducing citizens to ensure that their reproductive actions help constitute a morally, economically, and politically desirable body politic, and to expect sanctions otherwise (Bashford 2006; Kanaaneh 2002; Kligman 1998; Hashash 2010; Suh 2015).

Importantly, feminist scholarship has identified a "gender asymmetry" in patterns of reproductive control, providing three key arguments for why the medicalization and biomedicalization of reproduction disproportionately engage women's bodies and are relatively resistant to implicating men (Oudshoorn 2003). Taken together, this scholarship highlights how reproductive governance has been shaped by "gendered technoscience"—that is, by the gendered assumptions and definitions that accompany scientific practice and processes of technological innovation, and the ways in which technoscientific practices and artifacts, in turn, co-construct gendered meanings and ideologies (Wacjman 2007). First, long-standing cultural ideologies have framed women as the primary agents of reproduction, likely due to the women's greater "visibility" in various stages of reproduction including pregnancy, gestation, and childbirth (Riessman 1983). In turn, states, scientific authorities, and lay publics have historically viewed reproduction as more "essential" to women. As a result of these essentialist ideologies, the

scientific development of reproductive technologies in twentieth-century medicine and biomedicine, spurred by international movements to curb global overpopulation and recognize women's reproductive autonomy, was almost exclusively oriented to the female reproductive system (Clarke 1998; Takeshita 2011). Finally, these cultural and historical factors have "hardened" institutional practices for the production of reproductive knowledge within a pattern of focus on women (Oudshoorn 2003). Accompanied by similarly deep-rooted ideologies of masculinity that disassociate men from reproduction, this institutional hardening has rendered men's reproduction relatively resistant to medicalization and biomedicalization, and, subsequently, to social control.[1]

Women, therefore, have historically been the "implicated actors" in programs of reproductive regulation, as well as assumed to be the primary "prospective users" of the reproductive technologies promoted in these programs (Clark 1998; Gutmann 2007; Marks 2001; Oudshoorn 2003; Takeshita 2011). "Implicated actors" are defined as those individuals and groups that are either imagined to be pertinent to a particular technosocial problem or become pertinent even if they do not fall within otherwise neatly defined criteria for relevance (Clarke 1998). The related term "prospective users" denotes those implicated actors that are explicitly assumed to be the primary audience or market for a particular technoscientific product (Akrich 1995; Mamo 2007; Mamo and Fishman 2001; Oudshoorn and Pinch 2003), and the "configuration" of prospective users can significantly shape technological design and the

[1] While men's relationships to *reproduction* have historically been resistant to medicalization and biomedicalization relative to those of women, other aspects of the male body, male sexuality, and men's health have long been viewed through medicalized and biomedicalized frames, many of which intersect with understandings of race, class, and sexuality; see essays in Rosenfeld and Faircloth (2006).

technoscientific practices behind this design (Oudshoorn, Rommes, and Stienstra 2004; Woolgar 1991).

Twentieth-century family planning and population control initiatives are particularly instructive examples of the gender asymmetry in reproductive governance and the configuration of its implicated actors. Feminist sociological scholarship and feminist technoscience studies illustrate how the history of twentieth-century population control is largely one of the biomedicalized surveillance of women's fertility. Touted as vital pathways towards modernization in low-income countries, these initiatives have sought predominantly to manage women's fertility, driven largely by developments in contraceptive biomedicine and reproductive technoscience that, for the reasons outlined above, have maintained an unwavering gaze on the female body (Clarke 1998). Here, too, scholars have analyzed institutional resistance to incorporating men into scientific research and political objectives across the globe, including in Bangladesh, Mexico, Taiwan, and Puerto Rico (Briggs 2002; Connelly 2008; Gutmann 2007; Hartmann 1987; Murphy 2012; Oudshoorn 2003). First, the development of new contraceptive technologies to aid population control has almost exclusively focused on female contraception as the reproductive sciences have tended to consider the typical "woman" as the prospective user of and market for contraceptive technologies (Clarke 1998; Oudshoorn 2003; Takeshita 2011). This has bolstered the state-led management of women's fertility, as national family planning programs have typically focused on popularizing female contraceptive technologies (Briggs 2002; Ginsburg and Rapp 1995; Gutmann 2007; Jeffery and Jeffery 1997). Finally, while international feminist discourse since the early 1990s has touted contraception's role in securing women's reproductive autonomy, women have also borne the brunt of states' violent attempts to coerce contraceptive use in the service of population control (Halfon 2007; Hartmann 1987). As

such, women have long constituted the typical *contraceptive subject* in state-led programs of population control.

Against this global backdrop, and in line with global scientific and political discourse at the time, the Indian government hoped to popularize contraception—primarily sterilization—to achieve its population control goals (Connelly 2008; Rao 2004). Yet given the broader literature's explanations of how global population control efforts have generally rested on surveilling women's bodies, it can seem puzzling that from the early 1960s through the mid-1970s India's population control program pivoted largely around men and male contraception. According to official estimates, vasectomies constituted around 21.1 million of all 32.7 million sterilizations recorded between 1956 and 1980—almost 65 percent of the total number (Ross and Huber 1983).[2] The largest proportion of these occurred between the early 1960s and 1977 as part of the country's family planning extension approach, with annual numbers peaking during India's Emergency Period from 1975-1977 (Tarlo 2003). Furthermore, government publicity materials and fieldworkers' promotional activities during this time period targeted men in droves, encouraging them to use contraception and to desire fewer children.[3] The extension

[2] Female sterilization currently outranks vasectomy worldwide, including in India, with vasectomies outpacing female sterilization in only four Western countries since the late 1980s—Canada, Great Britain, the Netherlands, and Australia. Between the 1950s and the early 1980s, however, these countries had higher rates of female sterilization, whereas India displayed a markedly higher proportion of vasectomies. India was also an outlier in this regard compared to other non-Western countries with investments in population control at the time (Pile and Barrone 2009).

[3] Although the Indian program continued to promote female contraception during this time, it resumed an almost exclusive focus on women only after 1977 when widespread and coercive sterilizations of men in the Emergency Period cast vasectomy in a politically unfavorable light; see Rao (2004) and Tarlo (2003).

approach saw the Indian government prioritizing the manufacturing, distribution, and advertising of a government-manufactured condom brand named “Nirodh” during the 1960s and 1970s.

This particular chapter in the history of reproductive control in India brings up important and underexplored questions about the relationships between gendered knowledge, the social control of men’s reproduction, and the fashioning of men as contraceptive subjects. Specifically, it calls for a renewed consideration of how and when men’s relationships to reproduction—and, in particular, contraception—become imaginable as politically regulable, especially in a larger context dominated by the medical and biomedical surveillance of women. While feminist scholarship on reproductive control and knowledge is well prepared to answer the question, “why *not* men?” it is less equipped to answer the converse, “*why* men?” Posing the latter question is becoming more important as scholars begin to identify new instances of scientific and political interest in regulating men’s reproductive bodies while excavating older ones (Almeling 2015; Almeling and Waggoner 2013; Daniels 1997; Riska 2010; Rosenfeld and Faircloth 2006). Denying neither the historical reality of women’s positions as primary subjects of reproductive management nor the scholarly conditions that have produced a feminist inattention to men in the reproductive domain, an historically-sensitive, feminist inquiry into the social control of men’s reproduction in Cold War India might ask: how, when, and why do men become *imaginable* as subjects of reproductive control and, in particular, as contraceptive subjects?

One approach to this question involves investigating contexts that are historically resistant to scrutinizing men’s reproduction—in particular, the medical and biomedical sciences—and the cultural and technical “work” that goes into overcoming this resistance, an approach exemplified by feminist STS scholarship on biomedical efforts to develop a male

hormonal contraceptive (Oudshoorn 1999, 2003) and the science of "paternal epigenetics" and the politics of male bodies and reproductive risk (Almeling and Waggoner 2013; Daniels 1997; Waggoner 2016). This research shows that credentialed scientists, medical practitioners, patients, and lay communities both draw on and disavow aspects of hegemonic masculinity in order to characterize men as deserving of equal recognition and scrutiny in the "reproductive equation" and counteract otherwise resistant technoscientific domains (Almeling and Waggoner 2013).

In contrast, the history of technoscientific debates on overpopulation in India calls for looking beyond resistant contexts to examine alternative actors with parallel investments in reproductive governance. Doing so highlights the *distinctions* between these alternative contexts and those that have historically focused on women, and how those distinctions make men newly "thinkable" as targets of reproductive management. This dissertation conducts one of the first systematic explanations of the Indian population control program's nearly two-decade emphasis on men and male contraceptive promotion, extending work published elsewhere (Balasubramanian 2018). I argue that the notion that men could be germane targets of reproductive control was able to emerge in an epistemological context dedicated to understanding reproduction in social-psychological and not purely biological terms. In contrast to their medical and biomedical contemporaries who maintained a sustained focus on the reproductive body, family planning communications experts operated within a framework that understood reproduction as a cognitive phenomenon that involved information sharing, attitudes, and decision-making, and advocated reproductive interventions of a behavioral and cognitive nature. Furthermore, their goals to inculcate alternative economic practices among families included recommendations that family planning communications campaigns should frame contraceptive use and planned conception as economically beneficial endeavors. As a result,

social scientific goals to understand "reproductive decision-making" and the role of mass-communicated information in shaping such decision-making proved compatible with prevailing cultural ideologies of hegemonic heternormative masculinity and gendered difference that readily associated men with economic rationality and decision-making roles, cognitive reasoning and calculative thought, and formal and informal participation and communication in the public sphere (Bordo 1986; Connell 1995; Ellis 2017; Harding 1982; Keller 1985; Kimmel 2005; Ross-Smith and Kornberger 2004; Scott 2011). Consequently, communication scientists cast Indian men as indispensable targets of family planning extension efforts on account of their ostensible status as primary social and economic "decision-makers" and "opinion leaders" in their families and communities, while ignoring Indian women's contributions in these roles. Indian family planning officials took this reframing of men as reproductive decision-makers seriously, expanding the state's previously medicalized and women-centered approach to population control into one that incorporated behavioral interventions targeted at men.

The trajectory of population control efforts in postwar India complicates and extends prior sociological and STS research on the gendered configuration of the implicated actors of family planning programs and the prospective users of contraceptive technologies. While prior scholarship unwittingly focuses on women due to its analytical focus on female-oriented medical and biomedical interventions into reproduction, the Indian case highlights how social scientific expertise, through its definition of reproduction as a behavioral, economic, and cognitive phenomenon, advanced a very specific vision of governable reproductive masculinity. Here, social scientific efforts to configure the users of communications technologies and participants in communications networks underwrote the further configuration of contraceptive users, leading them eventually to men. In addition, as my analysis shows, family planning communications

experts did not feel the need to call for the development of technically more sophisticated methods of biomedical contraception, relying instead on the promotion of very "old" and established male contraceptive methods, such as condoms and vasectomies. This further underscores how gendered understandings of reproduction as a "rational" process led social scientific experts to relegate innovations in female-oriented contraceptive technologies to the background in favor of the development and use of male-oriented mass communications techniques.

The workings of gendered technoscience in the Indian case also echoes prior sociological and feminist technoscience studies research on the gendering of information and communications sciences and, in particular, the "masculinization" of the prospective users of their technoscientific products (Hicks 2017; Oudshoorn, Rommes, and Stienstra 2004). To a great extent, the masculinization of information and communications technologies and sciences has origins in dominant forms of hegemonic masculinity that continue to view men as the primary agents of rational thinking, cognitive reasoning, and scientific thinking (Bordo 1986; Harding 1982; Keller 1985). The communications experts I follow understood men in the Indian context as the primary users of mass communications and media technologies and as the principal participants and "leaders" in communication networks. Even though men in rural and urban India and across social classes have historically possessed greater access to social, familial, and economic power relative to their female counterparts, family planning communication scientists at best failed to see or at worst ignored alternative spheres of communication in which women participated, exchanged information, and formed opinions and beliefs on various issues (Forbes 1996). As a result, in family planning communications literature on India during this time period, women appeared as inconsistent, if not unreliable,

users of communications technologies, inefficient participants in communications networks, and whose ability to impact the process of public opinion formation was limited to their affiliation with their husbands.

To be clear, however, this dissertation does not displace or dispute accounts of massive state-led, technoscientific efforts to regulate women's fertility in postwar India, much of which proceeded under alternative logics of Third World women's intellectual "backwardness" (e.g. Chatterjee and Riley 2001; Gandhi and Shah 1992; Jeffery and Jeffery 1997; see Takeshita 2011). On the contrary, I employ a relational view of gender to provide a more comprehensive picture of how and why men in India were framed as suitable targets for reproductive management in addition to women, and broaden the reach of feminist scholarship to account for the place of men in larger dynamics of state-led reproductive regulation. As such, the dissertation is a reminder of the historical contingency of the gendered dynamics of reproductive control.

Broadly, my analysis of the Indian family planning program's unconventional emphasis on men makes two theoretical contributions to feminist sociological and STS scholarship on reproductive governance and gendered technoscience. First, it invites feminist scholarship to reconsider what falls within the definitional ambit of reproductive governance to begin with. In focusing almost exclusively on state-sanctioned medical and biomedical interventions into reproduction, which have tended to center on women, this scholarship has inadvertently reproduced a gender asymmetry of its own. Broadening the definition of reproductive governance to include behavioral and social interventions can help account for multiple contexts that seek to discipline men's relationships to reproduction including adolescent sex education, contraceptive marketing, and "responsible fatherhood" welfare programs (Curran and Abrams 2000; Hobson 2002; Oaks 2009; Orloff and Monson 2002; Oudshoorn 1999, 2004).

Second, the Indian case spotlights the role of the *social sciences* as key architects of reproductive regulation, which remains largely uncharted territory in feminist sociological and STS literature on reproductive governance. While a handful of historians and anthropologists have plumbed the historical role of demography and, in some cases, economics in creating and legitimizing international family planning programs (e.g. Briggs 2002; Connelly 2008; Greenhalgh 1996; McCann 2016; Murphy 2017), this is an area ripe for extended research (see Camic, Gross, and Lamont 2011 for a discussion of the social sciences' place in the sociology of knowledge). Furthermore, ascertaining the role of social scientific expertise in reproductive governance illuminates the need for alternative conceptual frameworks than medicalization and biomedicalization to analyze reproductive surveillance and management. I proffer the term "behavioralization" as a way to think through the distinct terms in which the social scientists I follow sought to understand and intervene in reproduction and fertility—that is, as processes with cognitive, social, and psychological dimensions and that could be investigated as much as a series of behaviors as a set of biological processes. As a concept, behavioralization may be extrapolated to other empirical and historical cases in which social scientists have sought to claim expert jurisdiction over social "problems" concerning reproduction and intervene in them through behavioral techniques.

1.5. Methods, Evidence, and Analysis

This project conducts qualitative analyses of primary archival documents, supplemented with evidence from secondary historical and historical sociological scholarship, with a view to historicizing how and why the Indian population control and family planning program shifted from the medicalized clinic approach of the 1950s to one that employed mass communications

techniques in the early 1960s. It also addresses how and why this shift was characterized by a simultaneous transformation in programmatic emphasis towards the inclusion of men as potential users of birth control.

Collectively, I consulted over 800 individual archival documents. A significant set of documents date from 1920 to 1952 and form the bulk of evidence for Chapter 2, which investigates the historical and political factors that undergirded key shifts in American demographic scholarship and subsequently led to the establishment of the clinical approach to population control in India. The majority of primary documents, however, date between 1952—when the Indian government officially instituted population limitation as a national policy priority—and 1977, which marked the end of the Indian Emergency Period and the subsequent phasing out of men as explicit targets of state-directed family planning programs. Chapters 3-5 rely on analyses of these documents.

As the project is interested in the influence of intersecting social worlds on these shifts, I pay attention to how particular actors and organizations introduced new ideas about family planning and population management into prior international conversations on those issues, thereby realigning and reframing scientific priorities and political activities. Since the social worlds framework is also committed to analyzing science as a historically and socially situated set of practices, I pay particular attention to the political and scientific contexts that undergirded those realignments. While I identified many relevant social actors and worlds through my reading of the secondary historical and historical sociological scholarship on twentieth-century population control and international family planning, my examination of the above materials identified other actors and institutions that have been largely overlooked in prior scholarship. In particular, these included the interdisciplinary communication sciences and their adherents in the

subfield of demography. Second, given the immense role that American private foundations and research organizations played in sponsoring and disseminating family planning communications research during this time period, some of the most important organizational archives consulted include those of the Ford Foundation and Population Council. Additionally, I traced the activities of key Indian bureaucrats and policymakers in the fields of population management, family planning, and information and broadcasting at the state and central government levels, attending to how these actors responded to the influx of American expertise on family planning communications into the Indian policymaking context.

The archival documents I analyzed include correspondence among scientists, population control advocates, private foundation officials, policymakers and bureaucratic officials, and research donors; organizational reports; reports of conference proceedings; working papers; grants and grant reports; published scientific scholarship in periodicals and scholarly books; and newspaper articles. Published scientific scholarship provided important insights into the development of family planning communications research as a stand-along subfield from its collective roots in demography and behavioralist research on mass communication. Private correspondence provided insights into the various interests and intentions of relevant social actors beyond what they articulated in published scholarship, and helped uncover how and why behavioralist approaches to the study of family planning and population limitation came to be prioritized over time. Finally, I also analyzed family planning advertisements and mass media artifacts that were used in the Indian state's extension activities. In doing so, I illustrate the ways in which they reflected communications experts' gendered understandings of information sharing and economic decision-making and reified men as indispensable audiences for persuasive information on the presumed benefits of birth control and nuclear family structures.

Relevant published scholarship on family planning communications research was culled through keyword searches of leading scholarly periodicals and databases. Leading periodicals that emerged from database searches include *Demography* (published by the Population Association of America), *Journal of Marriage and Family*, and *Studies in Family Planning* (published by the Population Council). Although many other journals were also represented in my searches, these three leading periodicals housed the majority of relevant articles by family planning communications scholars writing on India specifically and birth control communications more generally. Having identified key actors in the Indian case over the course of the project, I conducted additional author-based searches using the POPLINE database to locate other relevant writings on reproductive decision-making, family planning communications, and the specific issue of men in family planning communications.

My search for relevant organizational documents, grants, correspondence, and media advertisements in the physical archival collections was guided largely by archival finding aids. In addition, conversations with individual archivists helped narrow and refine my search criteria. Finally, to frame the historical setting for this study, I refer to secondary scholarship on global population control, the emergence of family planning communications research, family planning in India, and the history of men in family planning research.

1.5.1. Physical Archival Collections

Rockefeller Archives Center, Sleepy Hollow, NY

- Ford Foundation Records
- John D. Rockefeller 3rd Associates Records
- Population Council Records

- Rockefeller Foundation Records
- Social Science Research Council Records

NASA Digital Historical Reference Collection, Washington, D.C.

National Archives of India, New Delhi, India

- Planning Commission Archives
- Shah Commission Archives

Nehru Memorial Museum and Library, New Delhi, India

- Asok Mitra Papers
- P.N. Haksar Papers

National Archives at College Park, College Park, Maryland

- Records of the National Aeronautics and Space Administration, 1903-2006

1.6. Organization of Chapters

The dissertation is organized into four empirical chapters. Chapter 2 provides a historical analysis of the scientific and political antecedents of population control efforts in postcolonial India, focusing on the roughly forty-year period prior to the institution of population limitation by the independent Indian government as a national policy goal in 1952. In particular, it traces how population control as it is commonly understood today developed from intersecting, early twentieth-century movements in support of eugenics, neo-Malthusianism, and birth control. At the center of these movements were a host of overlapping "social worlds:" American and non-American social scientists, including demographers, statisticians, and sociologists; American and Indian policymakers and government agencies; private foundations and independent research donor organizations; and social movement activists. The chapter explains how scientific and

political attempts to legitimize the state-led management of "population" morphed from being concerned over population "quality" to population "quantity." It also demonstrates how the shift from quality to quantity was accompanied by a simultaneous transformation of the level of analysis from the national to the global. Together, these two shifts in thought about population evolved from the midcentury revival of "demographic transition theory" among a small group of American demographers. Demographic transition theory thus pointed scientists and political leaders away from anxieties over the racial and classed composition of bounded national citizenries and towards absolute numbers and rates of growth of global population.

At the same time, national and qualitative frames of reference did not drop out of this picture but were defined altogether differently. After World War II and the advent of the global Cold War, demographic transition theory was reframed in macroeconomic terms, a move by which population growth rates were linked to both national economic productivity indicators and qualitative aspects of the national political economy. As a result, technologically assisted fertility control through "direct approaches"—namely, the promotion of contraceptive technologies and techniques—became newly understood as a way to intervene in national economic growth and secure the place of democratic capitalism in a new world order. This further underscored the apparent national significance of population control for low-income countries of the "developing world" while providing a compelling rationale for American political and scientific actors—worried about the spread of communist political and economic philosophies in the postcolonial world—to advocate on its behalf.

Finally, the chapter goes on to show the centrality of India in particular to the genesis of these claims. American demographers, sociologists, and macroeconomists used India as a key source of evidence in their reevaluation of demographic transition theory and their eventual

efforts to "forecast" the political and economic dangers of unchecked population growth for non-aligned, low-income countries, of which India served as a *de facto* leader during the postwar period. It also analyzes the resultant primacy given to contraceptive technologies and the building of family planning clinic infrastructures in India during the first decade of its national population control program in the 1950s. As such, the chapter outlines the political, material, and technoscientific *conditions* that set the stage for the rise and application of family planning communications expertise in the Indian programs in the early 1960s.

Chapter 3 demonstrates how a new cadre of "family planning communication scientists" drew on the science of mass communication and public opinion to reframe the global overpopulation crisis as less a biomedical quest for an unassailable contraceptive than a psychological battle for "hearts and minds." In turn, they advocated using persuasive mass communications on the virtues of contraception and nuclear families to influence people's reproductive beliefs and decisions, thereby framing mass communications techniques and technologies as the "right tool" for the job of population control in India. Here, I trace the confluence of the social worlds in Chapter 2 with the world of the communication sciences, and how it led to the rearticulation of the population crisis in social-psychological terms. These encounters were facilitated through private funding networks and broader shifts in social scientific methodological and theoretical outlooks towards a focus on "behavioralism."

Chapter 4 illustrates how the Indian state, in response to communication scientists' arguments, instituted wide-ranging information infrastructures and communications campaigns for persuading citizens to believe in the virtues of contraception and small nuclear families. In large part, the state's willingness to change its approach to popularizing family planning was buttressed by its longstanding relationships with private foundations, such as the Ford

Foundation and Rockefeller Foundation, as well as with independent population research organizations, such as the foundation-funded Population Council. The Ford Foundation's leaders in India, in particular, served as a "bridge" linking Indian policymakers, American and Indian social scientists working on the issue of family planning communications, and state-level bureaucratic agencies in charge of implementing extension programs—chiefly because of their own prior training in the social sciences and, especially, the sciences of agricultural extension and mass communications.

Chapter 5 analyzes the gendered consequences of this shift in approach. Mid-century social scientists' gendered associations of cognitive reasoning, economic decision-making, and participation in communication networks in the public sphere with men and masculinity led them to cast Indian men as more appropriate targets of communications intended to influence reproductive decision-making and promote the use of contraception as an economically beneficial activity. As a result, the Indian state aimed its new mass communications campaigns on birth control and family planning largely at men, enjoining them to use condoms, undergo vasectomies, and calculate the benefits of small nuclear families.

CHAPTER 2

From Fitter To Fewer People: The Consolidation of Global Population Control in the Interwar and Postwar Periods

2.1. Introduction

In January 1945, Kingsley Davis, an American demographer and sociologist in the Office of Population Research (OPR) at Princeton University—now remembered as one of the giants in his field—opened his most recent publication with a foreboding statement: "Viewed in the long-run perspective, the growth of the earth's population has been like a long, thin powder fuse that burns slowly and haltingly until it finally reaches the charge and then explodes." (1945:1). After elaborating on shifting global population growth rates over the last three centuries (Fig. 1), which had come to rest at 0.75 percent per year between 1900 and 1940, as well as on how Asia appeared to be a primary contributor to these rising rates, Davis admitted that "rates of growth of less than one per cent per year do not *seem* high to us… but they *are* high. Should the present global population continue to increase at the same rate that prevailed between 1900 and 1940, the earth would hold over 21 billion inhabitants by the year 2240" (1945:3, emphases in original). For Davis, this prospect could not be imagined, much less countenanced. Warning of an approaching "beehive world in which ten or twenty billion people barely eke out a livelihood" (1945: 8), he declared that the "present rate must be temporary" (1945:3). Still, Davis was optimistic that such a world would not come to pass. Arguing that fertility declines over the course of recent history—then concentrated among the world's "advanced" nations—were the result of industrialization, urbanization, and "Westernization," he called for a "scientifically grounded population policy throughout the world" that would speed up these incipient processes in non-Western regions (1945:11).

At the same time, Davis devoted a significant portion of his article to a blunt admonishment of the "the implicit racialism in Anglo-American thinking" (1945:7), which he termed a "groundless basis" to fear such population increases. Casting aside the notion that "the Asiatic hordes are inherently different from Europeans, and that if they become dominant they will "reduce" the whole world to the Oriental level," he argued: "The existing civilization of the Orient is not fixed in the genes of the Asiatic races. It is rather a historical stage resembling in

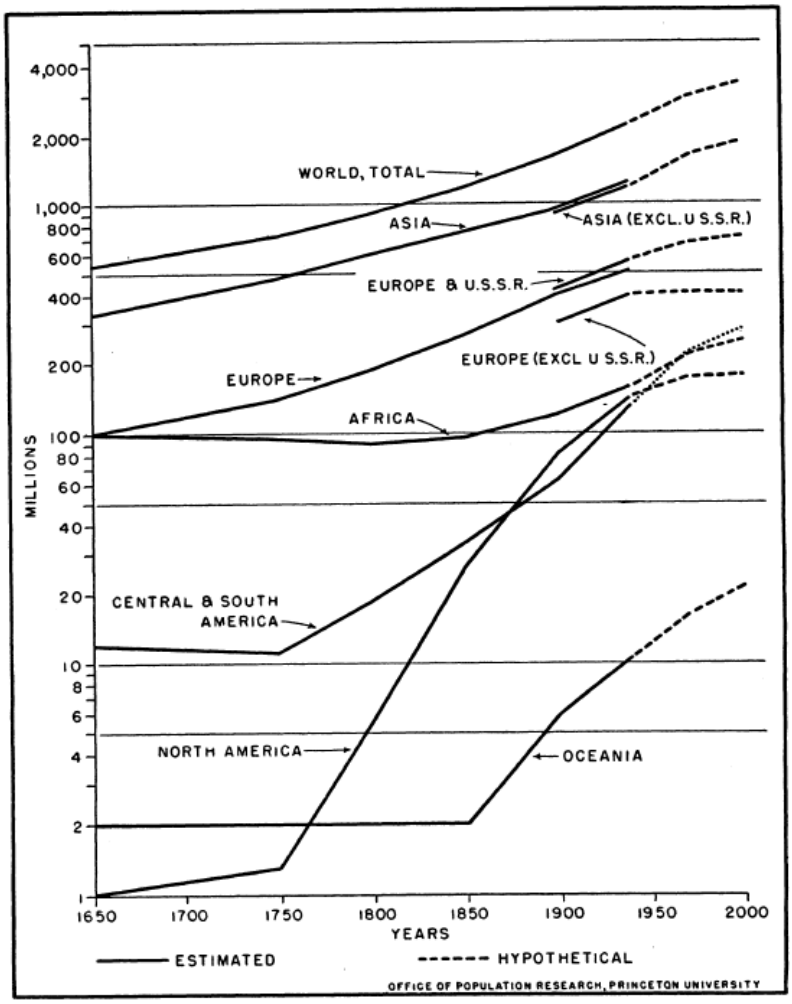

Figure 1. Kingsley Davis' representation of estimated population growth by world region in millions, 1650-2000. Source: Davis (1945).

some respects the medieval civilization of Europe. It will pass irretrievably as the Asiatic peoples become Westernized" (1945:7).

Davis's 1945 article encapsulates the crossroads at which American and Western European expertise on "population" found itself at the close of World War II. The science of eugenics, having experienced its heyday in the interwar period, was on the wane both socially and intellectually, as indicated in Davis's critique of his fellow Anglo-Americans. By then, eugenicists' trepidations about the genetic composition of world's "teeming millions" (Davis 1945:7) had given way to an alternative view of population with roots in wartime and postwar American demography—one that was concerned with global population's numerical size. This was not all that distinguished the new view from the old: emerging discussions of population size held fast to the twin goals of prognosing future rates of global population growth and providing suitable prescriptions for potential catastrophes—industrialization and urbanization at first, and later, proactive fertility regulation through contraception. These postwar discussions led to the formation of a global political and scientific "establishment" that some scholars have termed the global population control "movement" (Rao 2004; Bashford 2014; Connelly 2008; McCann 2009).[4] Moreover, Davis's article exemplifies postwar population control advocates' foundational interests in Asia and, in particular, India. These interests would profoundly shape advocates' public pronouncements, scientific research, and efforts to shape policy from World War II until the late 1970s.

[4] As Connelly (2006) notes, any institutional attempt to methodically regulate human life on an aggregate scale—including eugenics, immigration policy, pronatalist fertility promotion, and antinatalist fertility limitation—can be understood as *population control.* In this dissertation, however, I use the terms "population control" and "global population control" to denote the global movement to *limit fertility* that took shape in the interwar and postwar periods, and that understood population as a quantifiable, aggregate measure of human life.

In this chapter, I provide an analytical historical overview of the emergence of global population control in the run up to and immediate aftermath of World War II. I specifically chart the evolution of population control expertise from twentieth-century neo-Malthusianism and eugenics, the centrality of India to interwar and postwar discourse on overpopulation, and the infrastructures of research and programmatic implementation that were consolidated in postcolonial India during the 1950s to meet its goals of population limitation.

Tracing the emergence of global population control from 1920-1959 paints an analytical picture of the political and technoscientific *conditions* that set the stage for the emergence of family planning communications expertise in 1960s and its impact on the Indian population program. First, I elucidate how population control was fundamentally concerned with how reproduction was related to the "national macroeconomy," itself a twentieth-century idea that interwar demographers and economists represented through indices such as gross domestic product (GDP) and gross national product (GNP) (Hirschman 2016; Mitchell 2002; Murphy 2017). While the earliest foundations of population control advocacy were wrought in the crucible of eugenics, proponents of population control conjured distinct visions of how and why nation-states could, and should, regulate their citizens' reproductive lives (Connelly 2008). Gradually departing from eugenic rationales for "fitter" citizens that relied predominantly on racial and class-based understandings of human *quality*—conceptualized in terms of evolutionary heredity and innate biological superiority—arguments for worldwide population reduction stemmed from expert claims about an inverse *quantitative* relationship between the size of a national population and national economic development—casting "fewer" citizens, therefore, as a prerequisite for stable economic futures (McCann 2009; Murphy 2013). Michelle Murphy (2017) has termed these claims and the processes that they engendered as the "economization of

life," showing how a global network of twentieth-century biologists, demographers, and economists came together to suture reproduction with the fate of the nation-state in "logistic" and economic terms rather than evolutionary or hereditary terms, a decisive transformation in scientific thought that prevails to this day.[5] At the heart of this transformation was American demography's revival of "demographic transition theory" in the postwar period, which argued that industrialization and urbanization were primary determinants of fertility declines and economic development.

However, in the period following World War II, American advocates of population control went beyond rendering a healthy macroeconomy in quantitative terms to focus on what this meant for the *qualitative* nature of its internal arrangements—a concern that was buoyed up by broader American geopolitical fears. Concerned about the steady influx of Soviet economic resources and technocratic expertise in decolonizing countries during the Cold War, American demographers, political leaders, and philanthropic officials asserted that population control would secure the social and economic conditions for a macroeconomy based on principles of democratic capitalism and American liberal economics, while preventing those conditions that they believed would allow communist political and economic philosophies to take seed. In this new geopolitical context, demographers revised demographic transition theory, newly setting store by contraceptive technology and state-sponsored fertility regulation to speed up liberal economic development and avoid transitions to communism. As this chapter explains, not only did demographers' new stance on the theory change how the problem of overpopulation came to

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[5] I use "logistic" to mean "of, represented by, or relating to a logistic curve," commonly known as the S-curve or growth curve; see Webster-Merriam Dictionary. See Murphy (2017) for an discussion of how biologist Raymond Pearl formulated the original representation of a logistic relationship between population and the economy.

be understood but also helped establish demography as a legitimate discipline in the American academy.

Second, the interwar and postwar trajectory of global population control underscores the centrality of India itself to the institutionalization of these claims—as a scientific exemplar of the dangers of communist expansion, an early site for experimental and field research on family planning, and a budding market for the academic and technological products of this research. British colonial administrators, Indian political leaders, biomedical and medical professionals, and local and global birth control activists had been debating Malthusian and eugenic arguments for regulating India's population since at least the late 1800s (Ahluwahlia 2008; Connelly 2008; Hodges 2004, 2008). These included arguments that colonial India could benefit from proactively limiting reproduction among particular "classes" of people as a nationalist goal. Yet with the advent of new claims about an inverse relationship between population and the economy in the 1940s, India became central to international scientific and political discourse on population limitation. Indeed, some of the first systematic demographic and economic investigations into this relationship almost exclusively used survey and census data from colonial India to argue that without a systematic population control program in place, India was likely to breed conditions of poverty that were conducive to communist upheavals. As a result, India soon became a poster child for the urgency of population limitation, both for Western elites concerned about communist expansion and for non-Western governments worried about their economic futures (Connelly 2006). When India's fledgling government officially cast population limitation in 1952 as a part of its first Five-Year Plan, it became an active and eager recipient of American technoscientific and material resources for stemming the purported crisis, which American experts and their patrons just as eagerly provided. The ensuing decades witnessed the steady

growth of biomedical experimentation and demographic research on fertility control in the country, as well as the consolidation of international funding streams, local demographic training centers, and social scientific institutions. India became, as sociologist Donald Warwick (1982:28) has described, a "proving ground for birth control." Consequently, as I detail in Chapter 3, when social scientists turned to the science of mass communication to make new claims about its significance to population control and communist containment, India provided a ready environment to both test and promote these claims.

Finally, the interwar and postwar history of population control reveals those factors that cemented the Indian state's reliance on a medicalized "clinic approach" to population limitation in the 1950s, which centered on the building and stocking of family planning clinics, and eventually led to the implementation of the "extension approach." These factors include long-established traditions of contraceptive promotion and activism in late colonial and post-independence India (Ahluwahlia 2008; Hodges 2008); demographers' and private foundations' initial advocacy of "direct approaches" to fertility regulation—that is, increasing access to contraceptive technologies and services—as a pathway to economic development; their subsequent efforts to develop and disseminate biomedical contraceptive innovations, such as foam tablets and the IUD, both in India and globally (Clarke 1998; Takeshita 2011); and transnational efforts in the 1950s, led by American private foundations and receptive Indian policymakers, political leaders, and social scientists, to augment the programmatic implementation of family planning policies (Connelly 2006, 2008). As Chapter 3 later shows, while contraceptive use constituted the desired "end" for population control advocates, many of whom saw reproductive medicine and biomedicine as providing indispensable expertise, the new social scientific field of family planning communications—subsidized to a great extent by the

same private foundations—would eventually question the "means" by which this end could best be achieved. They argued that clinics could not guarantee important changes in public opinion that would drive Indian citizens to use contraception and do so from an economic standpoint, taking issue with clinics' presumed inability to "motivate" citizens to use contraception or believe in the economic virtues of planned conception, Extension researchers cast mass communications as an indispensable weapon in the battle against overpopulation and communist expansion, capable of transforming citizens' reproductive beliefs and behaviors and, in the process, creating new kinds of economic and political subjects. The field prompted the Indian state's subsequent turn towards a psychosocial "extension approach" in the early 1960s, drawn largely from behavioral scientific research on public opinion and agricultural extension. Contrary to the clinic approach, family planning extension incorporated the strategic deployment of mass media and large-scale interpersonal communication to create the psychosocial conditions for fertility limitation and, ultimately, democratic capitalism.

2.2. From "Quality" to "Quantity" and Back: Twentieth-Century Eugenics, Neo-Malthusianism, and the Early Foundations of Population Control

The invention of the term "eugenics" is generally attributed to Francis Galton, a prolific English academic who first detailed his views on the hereditary nature of human ability and its implications for the scientific management of reproductive relations in the late 1800s (Ahluwahlia 2008; Kevles 1998; Ramsden 2009). Eugenics coalesced into a recognizable field of academic research in the early 1900s, gaining a firm foothold in intellectual circles and popular discourse over the next four decades. As a field, it was as multi-disciplinary as it was transnational, composed of biologists, naturalists, statisticians, geneticists, economists,

anthropologists, and sociologists from close to thirty countries across the globe (Adams 1990). Despite eugenics' status as a scientific endeavor, eugenic principles spilled out of their academic boundaries to operate as a set of popular beliefs among elite social activists, political and religious leaders, and policymakers in multiple regions and countries. They increasingly touted the scientific management of genetic heredity for the "improvement" of citizens' abilities from a national standpoint and the betterment of human civilizational "fitness" from an evolutionary standpoint (Kevles 1998; Connelly 2008). In Great Britain and the United States, these beliefs and the science that upheld them were centered largely on geneticized notions of race, national origin, and mental health, and linked these putatively immutable characteristics to the degradation or uplift of the national population. Policy proposals based on these principles in the United States made their way through various state legislatures and at the federal level in the early 1900s, including, for example, sterilization policies in prisons and hospitals covering those deemed "unfit" to reproduce or "dysgenic," anti-miscegenation laws, and racial immigration quotas (Roberts 1997). Germany, Sweden, Great Britain, and France followed suit in later decades, with Nazi Germany's atrocities before and during World War II representing the worst of such policies' excesses in Europe (Barrett and Kurzman 2004).

While historians of twentieth-century eugenics have tended to focus on the United States and Western Europe, eugenic thought extended beyond Western regions. Indeed, colonial India, Japan, and Brazil had long-standing traditions of debating, and often promoting, eugenic prescriptions to meet national goals for population management (Adams 1990; Ahluwahlia 2008; Connelly 2008). In colonial India, the development of a thriving eugenic discourse among Indian nationals can be traced to the 1910s, dovetailing with the founding of the British Eugenics Education Society in 1907. The bulk of those engaged in these debates were social, political, and

academic elites—predominantly academics, statisticians, elite social workers, middle-class feminist activists, and physicians.[6] Departing from American and British notions of race and national origin, indigenous proponents of eugenics in colonial India often honed in on class, caste, and religious affiliation as well as local understandings of sexual morality and poverty in their diagnoses and prescriptions for population improvement. The popularity of eugenic principles among these networks, which were largely urban, upper- or middle-class, upper-caste, and Hindu, betrayed the social positionality of their concerns. More often than not, they advocated curtailing reproduction and surveilling sexual behavior among the poor, lower-caste communities, and certain religious groups, in particular, Muslims, while upholding the genetic import of upper-class, Brahminical Hindus to the future of Indian society (Ahluwahlia 2008; Hodges 2008). Yet even as Indian eugenicists proffered these alternative local explanations for selective reproduction, they were scarcely cut off from international discourse. Some—like biologist Gopaljee Ahluwahlia, philosophy professor Narayan Sitaram Phadke, economist Radhakamal Mukherjee, and the founder of India's first birth control clinic Aliyappin Padmanabha Pillay—were regular participants at international conferences on eugenics and birth control, as well as regular contributors to the leading international and local journals on these topics at the time, such as American birth control activist Margaret Sanger's *Birth Control Review* and Pillay's *Marriage Hygiene* (Ahluwahlia 2008; Connelly 2008).

[6] International middle-class feminists' fraught relationships with eugenics movements were based largely on their felt need to forge international alliances in support of birth control, although some feminists did have strong convictions in state-led eugenic policies; for more on the intersections between feminist birth control activism and eugenics, see Ahluwahlia (2008), Chesler (1992), and Connelly (2008).

Elite eugenic discourse in colonial India was shaped by distinct yet complementary visions of bourgeois nationalism, modernity, and sovereignty from British imperialism—all of which centered on the surveillance of reproduction and sexuality among those deemed physically and intellectually "unfit" (Ahluwahlia 2008). Like their Western and global counterparts, eugenics advocates did not share a common rationale for why this surveillance was necessary; on the contrary, their arguments for eugenic management were polyvalent and fraught. One line of argumentation, by far the most popular and well established, hinged on connecting the physical and intellectual health of nation with the bodies and minds of upper caste, Hindu men and their mothers. Narayan Phadke, A.P. Pillay, and Gopaljee Ahluwahlia, for example, continually valorized the inherently superior "physiques" of upper class and upper caste Hindu men, which were, to their distress, "being replaced by persons lean, lanky, and bony."[7] Another rationale envisioned the ameliorative environmental consequences of limiting procreation among their lower-income and lower caste contemporaries. These included stemming the congestion in urban housing, alleviating pressures on natural resources such as land and water, and the general improvement of living conditions in urban and rural areas. Finally, Indian eugenicists—both men and women—infused classical eugenic explanations of dysgenic fertility and heredity with local understandings of sexual morality and self-government. Casting sexual restraint and intellectual pursuit as foundational to upper class, Hindu culture while castigating the presumed "hypersexuality" and promiscuity of lower castes and the poor, they argued that limiting the fertility of the latter would set India on a path towards a sexually prudent and intellectually

[7] Ahluwahlia, quoted in Ahluwahlia (2008).

vibrant future, replete with “rational” people who were best positioned to argue for and attain *swaraj* or self-rule (Ahluwahlia 2008).

In the 1920s, however, Western eugenics discourse experienced a paradigm-shifting transformation, buoyed by the parallel neo-Malthusian movement and a scaling up of the population problem to a global level. Whereas classical eugenic theory and its political applications—as Galton and his contemporaries espoused—emphasized the improvement of the national population, new concerns emerged about fertility differentials across countries and regions of the world, giving a field that was theretofore nationally oriented a decidedly global tilt. This global casting of the problem of overpopulation began to muddy the distinction between its “qualitative” and “quantitative” aspects, as quantitative increases in population within non-Western regions and the prospect of unbridled immigration came to be discussed as threats to the overall quality of populations in Western regions (Bashford 2014). A number of American and British eugenicists and neo-Malthusians, including geneticist Edward Murray East, sociologist Edward Allsworth Ross, historian Lorthrop Stoddard, and economist Harold Wright, began to sound warnings about a “rising tide of color,” which they argued would spell the destruction of “Western civilization” (East 1923; Ross 1927; Stoddard 1920; Wright 1923). International conferences on birth control and eugenics started to debate the import of national fertility differentials and what projected shifts in the national—and, therefore, “racial”—composition of the world entailed for dominant Western countries and imperial powers. Ensuing discussions then pivoted to how this problem could be held in abeyance, if not wholly eradicated. These newly global concerns, however, were not merely semantic; they also had tangible effects on policies that sought to regulate the composition of national demographics. In the United States, for example, they culminated in the controversial National Origins Act of 1924, which

introduced national quotas for immigration and restricted the number of immigrants from particular countries, predominantly those from Asia, Southern Europe, and Eastern Europe (Haney-López 1996; Shah 2001, 2012).

While eugenicists had gained local and global popularity in the 1920s, they were divided on the prospect of birth control and its "indiscriminate" use to prevent births on an aggregate scale. Those averse to contraceptive development and dissemination for the purposes of large-scale population reduction were mainly located in Western Europe, including in Great Britain, France, and Germany. Their reluctance to entertain contraception was in large part due to the massive human losses of World War I and the after-effects of heavy taxation and war bonds on the economic climates of Europe and its colonies (Ahluwahlia 2008; Connelly 2008). Guiding their concerns was a resolute conviction in pro-natalist policy, whereby Europeans could be encouraged to have larger families to replenish wartime losses. In turn, they advocated stanching the spread of knowledge on effective birth control, a danger that the rise of neo-Malthusianism posed. Eugenicists in favor of birth control had to contend with these dissenting opinions and temper the threat of international dissolution, which often placed the motley field on shaky grounds while periodically provoking the ire of the Vatican. For these reasons, as Connelly (2008) illustrates, Western European and American eugenicists were never able to mount a sustained international front for their cause, remaining sequestered in a number of parochial networks across countries and regions.

Contraceptive technology, however, was squarely on the proverbial table, brought to and kept in view by a group of assiduous birth control activists that used it in attempts to settle the swirling debates around eugenics and neo-Malthusianism. American and European activists like Margaret Sanger, Marie Stopes, Edith How-Martyn, and Elise Ottesen-Jensen deftly blended

these seemingly incommensurable positions, arguing that the judicious promotion of contraception among the world's poor could powerfully tackle the twin goals of eugenic betterment and population reduction on a global scale. In colonial India, this reconciliation had long been achieved. Neo-Malthusian claims about the deleterious effects of overpopulation were well established and discussed among elite, Indian eugenics supporters in the 1920s and 1930s. A number of these advocates, including Pillay, Mukherjee, and Lady Dhanvanti Rama Rau, a wealthy feminist activist from Bombay, were also staunch supporters of contraceptive technologies and techniques, helming some of the world's earliest debates on birth control on a "hybrid" platform that stitched together the tenets of both philosophies (Ahluwahlia 2008). Indeed, some of the most vocal proponents of birth control were active members of the Indian Eugenics Society at Lahore and the Indian Neo-Malthusian League in Madras. Not unexpectedly, when Sanger and Stopes introduced foam powders, cervical caps, and pessaries to Indian physicians and chemist stores for commercial distribution in the 1930s, Indian eugenicists championed their promotion among the poor and lower-caste, Dalit communities whom they viewed as inherently disposed to sexual profligacy and, even in the absence of appropriate statistical evidence, high fecundity. At the same time, some advocated the restricted use of contraception among the middle and upper classes for the realization of sexual fulfillment and "modern" conjugal relations, wherein sexual activity could be dissociated from procreation (Ahluwahlia 2008). Thus, Indian elites were not only convinced that there had been increases in "inferior social strata" but also that these had added to the overall size of colonial India's population and appeared to place attendant pressures on the "health" of the nation.[8] They did not

[8] National Planning Committee working group on population, quoted in Connelly (2006:632).

take kindly, however, to the emergent global casting of the population problem, castigating Stoddard's and others' characterizations of "brown" and "yellow perils" (Connelly 2008).

Even so, the 1920s witnessed a subtle yet decisive shift in how Western scientists came to view population size within squarely quantitative terms, spearheaded by Raymond Pearl, an American biologist at Johns Hopkins University and, a decade later, by Warren Thompson, an American sociologist and demographer (Allen 1991; Pearl 1920; Murphy 2013, 2017). A friend of the Harvard geneticist Edward Murray East, Pearl would eventually change the scope and terms of the as yet protean debate over the point and purposes of scientific population management. In his 1925 book *The Biology of Population Growth*, Pearl gave voice to the idea that a statistical "law of growth" governed the relationship between a "population" and its "economy," the latter of which was defined as the sum of all productive and reproductive relations among that population, such as the production and consumption of food, paid and unpaid labor, and industrialization. Detailing the results of his experiments with fruit flies, he mapped the rate at which colonies of flies living in a closed environment with finite food resources grew, flourished, and then perished. The glass bottle in which Pearl immersed his fruit flies represented "the economy" as an enclosed system with a number of exhaustible resources, including space, food, and water. In addition to this experimental evidence, Pearl plotted statistical data on birth rates from the French colony of Algeria to vindicate his experimental endeavors (Murphy 2017). Representing these rates on an "S-shaped" or logistic growth curve, Pearl concluded that there also existed a point of population "saturation" beyond which any additional population growth would lead to increased mortality due to a shortage of life-sustaining resources (Pearl 1920). Higher population growth rates thus meant added pressures on

economic relations of production and reproduction, with potentially dire consequences beyond the point of saturation.

Although Pearl's work did not spur any massive reorganization of eugenic and neo-Malthusian discourse when it was first published, his statistical representation of a relationship between the concepts of population and the economy was nonetheless a watershed moment in the history of twentieth-century population control. Prevailing neo-Malthusian arguments for population reduction in Asia and elsewhere often relied on unclear and imperfect census data to represent historical fertility trends in absolute numbers, sometimes even resorting to anecdotal and experiential evidence from their proponents' travels to putatively overpopulated regions, including India. Moreover, until Pearl, neo-Malthusian scientists had made no attempt to conceptualize any kind of measurable "tipping point" beyond which one could expect suboptimal consequences; on the contrary, population sizes were compared in historical fashion—as a shift from one point to another in time—accompanied by general calls to action. On the other hand, by working in an experimental fashion and directly comparing the "law" of human growth to that of "lower animals," Pearl had made mathematical *projections* of population growth and its consequences imaginable—and the possibility, as well, of checking such growth with sufficient warning so that it did not pass saturation (Woolston 1929:403). Furthermore, he had provided one of the first, systematic explanations of a population's presumed relationship with the economy, conceived not in terms of individual prosperity or penury but as the systematic, aggregable set of productive activities and relationships in which a population was engaged (Murphy 2013, 2017). Unlike his unwitting fruit flies, however, "[m]an," Pearl stated, "in theory at least, has it now completely in his power to determine what kind of people will make up the earth's population of saturation" and decide on a course of rational action, hinting at what was to

come in twenty years: a broad-based consensus on how innovative contraceptive technology would be best positioned to curb rising fertility rates across the poorer parts of the world (Pearl 1912:395).

Pearl's conclusions did not exist in a vacuum. While Pearl was working on his *Drosophila* experiments at Johns Hopkins, demographer and sociologist Warren Thompson was making similar arguments using historical statistical data from the United States and a number of Western European countries. Piquing the interest of newspaper tycoon Edward Willis Scripps, who had managed to read his 1915 dissertation on "Malthusian economics," Thompson accompanied Scripps on a tour of Asia to talk about global population "danger spots." After this trip, Scripps became a committed patron of Thompson's work, creating and funding the Scripps Foundation for Research in Population Problems at Miami University in Ohio and naming Thompson as its director. In that capacity, and four years after Pearl had detailed his theory of statistical population growth, Thompson (1929a,b) published his arguments about what he termed "the demographic transition"—a teleological rendering of the movement of countries and regions of the world across three categories, simply named as Groups A, B, and C: one characterized by high birth and death rates (C), including India and Japan; another characterized by high birth rates and low death rates (B), including Italy and Spain; and, finally, one characterized by low birth and death rates (A), including England and France. According to Thompson, societies could be expected to move from category C to B and then A as the level of industrialization of their economies and the level of urbanization of organized communities increased. Showing evidence that the adoption of birth control was lower for rural and agrarian communities than urban and industrial ones, industrialization and urbanization, he argued, would

spur declines in fertility rates—thus allowing these declines to balance out more rapid decreases in death rates that modern technologies of medicine and public health had helped usher.

This was the "demographic transition" according to Thompson, a comparative-historical and causal explanation for how the industrialization of a society's economy shaped its population size and, in turn, the latter's impact on geopolitical, economic, and social stability. Ending an article on the matter in the *American Journal of Sociology*, he questioned whether regions like India—then under the yoke of British rule—would industrialize in time for fertility rates to fall low enough to counteract death rates and other checks on population size, such as famine and disease. For his part, Thompson was pessimistic, stating that the best solution was a veritable redistribution of land from regions with low population density to those with rapid population growth in order to enable the redistribution of people. In an ominous concluding statement, he cautioned that the "redistribution of the lands of the earth is the problem of problems that we must face in the world today as a consequence of the new population movements that are taking place. Can it be effected peaceably or must it be achieved by war?" (1929a:975). As Bashford (2014) has analyzed, many of Thompson's contemporaries shared his early beliefs in global land redistribution and the loosening of immigration restrictions as solutions to the geopolitical perils of overpopulation. Ironically, while Thompson had set the stage for demographic transition theory to take over American demographic thought in the interwar period, he would change his original emphases on industrialization and land redistribution in two short decades—coming to espouse, instead, direct fertility regulation and birth control promotion as antidotes to unsustainable population growth.

Although Pearl's and Thompson's approaches were aligned with contemporaneous concerns over global population quantity, their treatises were some of the first to delineate a relationship between population size and the national macroeconomy in logistic and calculable terms (Murphy 2017). While Pearl remained active in international eugenics and birth control advocacy networks throughout the 1920s and Thompson continued to teach transition theory, their observations would wait in the wings until a new cadre of American demographers rearticulated them during and after World War II for reasons that were altogether distinct from eugenicist and neo-Malthusian agendas. This new group would also dismiss interwar convictions in the reorganization of the "lands of the world" and settle, instead, on contraceptive technology and fertility regulation as primary responses to unchecked population growth (Bashford 2007, 2014). In the interim, contraceptive technology, as Raymond Pearl put it, would acquire a "certain degree of academic respectability," though not a very high one, due in part to the efforts of international birth control activists to garner global support for contraception and bankroll the development of new contraceptive technologies in the reproductive sciences (Clarke 1998; Takeshita 2011).[9] This time period also witnessed the considerable demographic shifts in a newly decolonizing world, which included demonstrable rises in British India's population. It was only during the turbulent 1940s, therefore, that what had, until then, been a set of fragmentary and polyvocal claims about how and why to control human fertility crystallized into what is recognizable as the global population control and family planning movement.

[9] Pearl, quoted in Connelly (2008:64-65).

2.3 A Discipline in Need of Legitimacy: American Demography and the Postwar Revival of Classical Demographic Transition Theory

In the aftermath of global economic upheavals, such as the Great Depression, and World War II, when the Nazi Party in Germany organized and executed an odious program of "racial hygiene," American and British intellectuals who were once active in eugenic circles distanced themselves from that label. What was lauded as a respectable and cutting-edge science of rational reproductive management receded into the background as a set of discredited and stigmatized ideas, a retreat that was shaped, in turn, by shifting racial politics in the United States and the United Kingdom (Ramsden 2009). The worst of Nazi Germany's atrocities heralded a move away, at least on its face, from biologically coded notions of better breeding towards a new focus on "voluntary parenthood" and "family planning," both of which came to characterize the broader goals of "population control" (Connelly 2008; Ziegler 2008).

Inasmuch as this nascent version of population control differed from eugenics in its attempts to quantify the links between fertility and the macroeconomy, it nevertheless appeared to reformulate the latter's racial and class-based understanding of reproductive control, such that lower "quantity" appeared to beget higher "quality" (Murphy 2017).[10] By the early 1940s, when population reduction had become a steady fixture of international scientific and political discourse and eugenics was largely stigmatized due to the genocides perpetrated in Nazi Germany, population control proponents and demographers in the United States found themselves navigating choppy waters in their fight to stay both politically relevant and academically solvent (Connelly 2008). Many faced the fourfold prospect of appeasing wealthy

[10] I use "quantify" to refer to the process of representing a phenomenon in numerical terms and making it amenable to mensuration; see Espeland and Stevens (2008).

private donors still committed to eugenic principles, appealing to foreign governments concerned about unfettered access to birth control, responding to feminist activists' demands for contraceptive freedom, and avoiding the stigma of eugenics to conduct and publish scientific research on contraception. They attempted to neutralize these tensions by creating terminology that could hold multiple meanings and satisfy various constituencies—for example, conceptualizing "differential fertility" instead of "dysgenic fertility" and cloaking residual eugenic aspirations under the mantle of "voluntary parenthood" (Connelly 2008; Greenhalgh 1996; Ramsden 2009; Ziegler 2008).

While Pearl and Thompson had sowed the seeds for one of the boldest reinventions of the population "problem" yet, the transformation of scholarly concern from population quality to population quantity would only be complete with the institutionalization of demography as a sub-discipline in the American university during the 1940s and the geopolitical reordering of countries that World War II engendered. These two shifts placed policymakers, research donors, and experts from a newly powerful United States in prime positions to legitimize and direct the implementation of global population control.

Until the middle of the 1930s, demography was a social scientific outlier in the American academy, dwarfed in status, resources, and recognition by the five "core" social science disciplines: anthropology, economics, political science, psychology and sociology (Ross 1991). Many of the earliest American demographers were typically graduates of sociology and social statistics programs. As working researchers, they were regularly beset with shortages in grant funding, recognition, and employment security in disciplines that had yet to view their contributions as foundational disciplinary concerns (Greenhalgh 1996). Some, like Frank Notestein, who would become one of the leading demographers in postwar sociology, did not

work in the university setting at all but as staff members in private foundations with an interest in population issues, such as the Milbank Memorial Fund where Notestein worked until 1936.

On the other hand, demographers—and sociologists who engaged primarily in demographic research—were well known outside the university setting on account of their long-standing participation in international circuits of eugenic, neo-Malthusian, and birth control discourse (Connelly 2008). Many of the latter's prominent and most well connected supporters found ways to energize demographers' academic contributions to this discourse. In 1931, for example, Margaret Sanger acquired funding for a group that she hoped would be the "scientific" face of popular concerns over various aspects of population size and quality—the Population Association of America (PAA)—under the stewardship of sociologist and demographer Henry Fairchild Pratt. The PAA remains the premier national organization of demographers in the United States. Soon afterwards, in 1936, wealthy philanthropist and American Eugenics Society secretary Frederick Osborn used his trusteeships at Princeton University and the Milbank Memorial Fund to acquire funds for the first graduate program in American demography and population studies, the OPR at Princeton (Coale 1978). Headed by Notestein, the OPR would become a central node in the discipline in the 1940s and its researchers would eventually resurrect Pearl's and Thompson's dormant ideas.

The proliferation and acceleration of concerns over global population management in the 1940s, as well as the readiness of the U.S. government, population activists, and wealthy private foundations to bankroll demographic research, opened up a number of structural opportunities for demographers to coalesce under a single banner and chart the course of the fledgling sub-discipline. The flagship of this new intellectual agenda, moored at the OPR, was classical demographic transition theory. OPR sociologists Dudley Kirk, Kingsley Davis, and Notestein

revived Warren Thompson's treatise, using funding from the U.S. Department of State and the Carnegie Corporation to both bring Thompson's argument up to date and make population growth projections with new evidence from India and Pakistan (Connelly 2008; Davis 1944, 1945; Kirk 1944). Some of this work was conducted explicitly under the auspices of the exiled League of Nations, whose demographic committee coordinated an agreement with the OPR to conduct studies on its behalf after suspending its activities during World War II (Kirk 1946). Echoing Thompson, the three researchers put the full weight of transition theory behind industrialization and urbanization, while ignoring his earlier claims about global land redistribution and, at least initially, dismissing his pessimism about the prospects of industrialization in "Group C" regions. Between 1936 and 1946, they steadfastly argued that birth rates in decolonizing and lower-income regions of the world would fall automatically in response to both of those processes much like birth rates had apparently done in Western Europe.

Yet in the absence of significant funds from university coffers and research councils but a profusion of monies from extramural sources, demographers recognized the vital importance of both demarcating themselves as professional scientists worthy of academic recognition and connecting their research to policy, while simultaneously dissociating themselves from the "dogmatism" of religious, moral, and activist agendas (Lunde 1981:481). This delicate balancing act would constitute demographers' recipe for attaining academic institutionalization, which involved a number of "boundary work" strategies (Greenhalgh 1996). First, the founding of new research centers, such as the OPR, did much to cement demography as a mathematically rigorous, theory-driven, and methodologically robust field, spurring their professionalization in the academy while emboldening them to scrub the taint of "activism" from their new university

perches.[11] Indeed, Sanger herself was barred from assuming office in the PAA's "College of Fellows," which was reserved for credentialed academics in their attempt to sanitize the Association from overt connections to neo-Malthusian and birth control agendas. This demarcation of credentialed demography from heterogeneous networks of activists and wealthy donors helped demographers consolidate their standing as a scientific discipline with a nationally organized corpus of researchers, affiliated predominantly with sociology but operating largely through extramural resources.[12]

Central to strengthening this newfound disciplinary security, however, was demographers' ability to sustain the interest of government agencies and private foundations, whose postwar commitments to the international policy applications of academic research drove their investments in it (Greenhalgh 1996; Krige and Rausch 2012; Sharpless 1997). As such, demographers sought to ensure that their theoretical conclusions could be molded to such applications even as they looked in official pronouncements to distance themselves from charges of "social engineering" (Szreter 1993:664). The irony, as Greenhalgh (1996) and a number of insider histories note, is that postwar demography could hardly shake this label off: more often than not, it was obliged to restate the terms of its own questions to provide answers that policymakers and foundations would readily understand and find usable (Hodgson 1983; Szreter 1993).

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[11] On postwar demographers' own thoughts about the interface between "science" and "activism," see Hauser (1964) and Hauser and Duncan (1959).

[12] Demographers' efforts in this regard were part of a broader trajectory of professionalization around positivist and empiricist methodologies in interwar and postwar American sociology; for more on this history, see Steinmetz (2005a, b).

Demographers wove this disciplinary warp and weft by attaching classical demographic transition theory to postwar American foreign policy imperatives centered on "international development," to which federal policymakers, development planners, and foundations were particularly committed (Sharpless 1997; Szreter 1993). They reiterated earlier warnings about the "teeming millions" poised to threaten the military and economic power of Western societies, but transmuted prior, eugenic concerns with dysgenic human futures into fears of a potential eradication of "Western civilization" (Davis 1945:7). While Davis used this phrase initially to refer to notions of Western "culture," after the onset of the Cold War, the steady dissolution of formal European imperialism, and the growth of American anticommunism in the 1950s it came to connote entire political, economic, and social systems, a point to which I return in the next section (Greenhalgh 1996). Writing on Asia, however, Davis believed that there was no reason to fear that the "a growth of the Asiatic races is going to cause the whole world to "sink" to the level of present-day Oriental civilization;" on the other hand, he averred that "Western civilization" was not an "airtight system… [but] a sociocultural system" that could be "borrowed piecemeal" and lead people in Asia to "become more like Europeans" (1945:7-8). In this way, demographic transition theory was an extension of, and drew legitimacy from, the school of "modernization theory," itself an embryonic offshoot of sociological thought at the time that would gain intellectual traction over the next two decades (Gilman 2004; Latham 2003, 2010; Szreter 1993). For federal policymakers and foundation representatives, the subsequent implication was to funnel funding towards initiatives in low-income countries that would speed up industrialization and urbanization in the hopes that doing so would allow demographic transitions and their attendant promises of "Westernization" and sustained macroeconomic growth to get underway in those regions.

As a result of these careful struggles for disciplinary funding and scientific legitimacy, American demographers began to be tapped to occupy central positions in national and international organizations dedicated to international development, helping to reconcile disparate views on the quantitative aspects of population management and their links to economic growth. Notestein was recruited as founding-director of the United Nations' new Population Division in 1946, a post that he held for two years and during which he helped establish global standards on population surveys, censuses, and statistical data collection procedures (McCann 2009; Notestein 1971). Kirk moved into service as the resident demographer at the U.S. Department of State's Office of Intelligence Research in 1947, thereby becoming the first federal official in charge of outlining the United States' position on global population issues (*PDR* Archives 2000). Others, like Davis and newly minted Princeton graduate Ansley Coale, who was appointed immediately as a faculty member at the OPR in 1947, continued to write extensively on demographic transition theory and its implications for geopolitical "power relations" after World War II (Davis 1944, 1945; Kirk 1944). Much of this work was funded through the U.S. Department of State, the UN Population Commission, and the wealthy foundations that had helped bring the OPR into existence (Szreter 1993). In this way, demographic theories of large-scale population dynamics and their role in economic development became entrenched in national and international organizations, which underscores their burgeoning impact on postwar international relations and development aid priorities.[13]

[13] While I focus on this close-knit network of Princeton demographers in this chapter, a ripe area for future research is the extent of influence of demographers outside the OPR on mid-century population discourse. As Greenhalgh (1996), Oakley (1977), and Szreter (1993) detail, however, the analytical focus on the OPR here is warranted, given the level of status it commanded through its direct relationships to federal agencies, private foundations, and philanthropists in the population arena, as well as the how these relationships brought about lasting shifts in

2.3. "Direct" Fertility Regulation and the Medicalization of Demographic Transition Theory

Even though American demographers had revived demographic transition theory during the interwar period and World War II, they had not yet made the leap from espousing classical demographic transition theory to championing "direct intercession" into fertility in regions that were deemed most prone to overpopulation (Greenhalgh 1996:39). The turning point arrived in 1948, when Notestein stepped down as director of the UN Population Division to embark on a three-month journey through Asia with fellow Princeton demographer Irene Taeuber in order to witness Asia's population problems first hand.[14] Asia appeared to be an obvious choice for the mission: during the 1940s, global population control activists, political leaders, and demographers continually referenced decennial census data from British India and European colonies in Indochina to warn of unsustainable increases in those regions (Connelly 2008). Funded by the wealthy Rockefeller Foundation—whose president, John D. Rockefeller III, had become convinced that overpopulation was a looming global threat—the mission was tasked

disciplinary interpretations and political applications of demographic transition theory. Moreover, even though some of the OPR's first researchers, like Kirk and Davis, did not stay at Princeton, they would bring their insights to other research organizations and university departments once they left.

[14] For detailed discussions of Notestein and Taeuber's participation in the Rockefeller mission and how it prompted their rethinking of demographic transition theory, see Oakley (1977) and Connelly (2008:134-38). Taeuber was one of the a high-ranking women sociologists and demographers in the U.S. at a time when women were less likely to move into the upper echelons

with mapping out what was to be done about the issue, both in terms of future research agendas and potential policy applications, in a world that was reorganizing itself geopolitically.

Notestein and Taeuber returned from the mission having changed their minds about demographic transition theory after an eventful trip to U.S.-occupied Japan (Oakley 1977, 1978). The two noted, much to their surprise, that Japan's birth rate was already low to begin with despite Japan not having attained levels of industrialization and urbanization comparable to those in Western Europe when it began its period of fertility decline. What was more, they encountered Japanese policymakers, birth control activists, and agrarian communities with collective interests in access to "simple" and effective contraception (Connelly 2008). Notestein and Taeuber "became more and more convinced" that "the unprecedented process of population control prior to material well-being is more likely to occur here than anywhere else on earth," possibly setting a "precedent for the whole of East Asia."[15] Accordingly, the problem was "too urgent to permit us to await the results of gradual processes of urbanization, such as [those] that took place in the Western world" (Notestein 1948:253).[16]

Notestein and Taeuber's abrupt about-face dovetailed with parallel shifts in their home base at the OPR. Together, these viewpoints came to proclaim proactive, state-led fertility regulation as the leading policy solution for the dangers of unchecked and rapid population growth. Kirk (1944, 1946) had recently reworked Thompson's original 1929 thesis, arguing that countries like Japan, India, and China were experiencing distinct and uneven forms of urbanization and industrialization, unlike those that had taken shape in Western Europe in prior

[15] Notestein, quoted in Connelly (2008:137).

[16] On Notestein's changing views on fertility control and demographic transition theory, see Szreter (1993).

centuries. For Kirk, therefore, a holistic program of modernization was called for, which included access to improved health facilities, access to information on birth control, and education. Thompson himself had abandoned his earlier emphases on industrialization and urbanization as the driving forces of fertility decline, at least when referring to non-Western regions, traveling to Japan at the behest of Supreme Commander for the Allied Powers (SCAP) Douglas MacArthur to convince policymakers that a sustained program of birth control education was necessary to ensure that the country could stave off overpopulation (Oakley 1977).

Put simply, while classical demographic transition theory conceptualized fertility as a consequence of economic development—that is, as a "dependent variable"—the revised version of the theory defined it as an "independent variable" that could exert a determining effect on development under certain conditions and, therefore, be willfully manipulated. Eventually, the Rockefeller Foundation mission's report, published in 1949, confirmed this change of tune, declaring that while fertility control was not a replacement for other structural and social variables, it might "turn out to be a necessary condition" for their success (Balfour et al. 1950:118). Notestein, for his part, stated baldly: "[w]e need to know how to reduce birth rates in an agrarian society" (1948:253). To this end, at a Milbank Memorial Fund roundtable panel, he called for "increased knowledge of the physiology of reproduction… [for] much simpler and more effective methods of contraception which would find more general acceptance" (1948:254). Demographers' and their wealthy patrons' new interests in biomedical innovations in contraception would become a defining characteristic of their efforts to implement global fertility regulation in the 1950s, which I analyze in the final section of the chapter.

By 1949, therefore, state-led fertility regulation was firmly ensconced in American demographers' policy pronouncements for countries that they believed were facing population catastrophe. Moreover, demographers had adjusted and readjusted their flagship theory to make this claim. They did so in response to both an increased demand for their insights from the U.S. federal government and wealthy foundations—which had, by then, come to view population management as a key endeavor in the maintenance of "peaceful" international relations—and their own convictions about technological contraception as a "necessary," if not only, condition for demographic change and strong macroeconomies.

Moreover, the content of demographic work itself changed course in the 1950s and beyond: with the lion's share of its funds coming from the U.S. federal government and wealthy foundations invested in the field's international applications, demographers like Notestein began to publish almost exclusively on population issues in non-Western regions while graduate students began to be trained overwhelmingly in applied family planning research (Greenhalgh 1996; Szreter 1993). In many ways, this notable shift in theory and policy outlook was indissociable from demographers' felt need to legitimize their field as a stand-alone, scientific discipline and garner a steady stream of resources for their work.

Before demographers' convictions in "direct intercession" could be realized in programmatic form, however, donors for population research and development aid had to be convinced of the urgency of the matter. In the early 1950s, demographic arguments about population control as a pressing foreign policy imperative would draw on escalating fears of the global spread of Soviet and Chinese communism, as well as new methodological techniques, such as computer-assisted population projections, to make their case (Connelly 2008; Hodgson 1983). Concurrently, faced with the U.S. federal government's reticence on contraception

promotion, demographic institutions and private foundations in the United States would take the lead in coordinating action with postcolonial governments. Beginning with India, they would successfully launch biomedical research agendas and social science training programs there in an attempt to establish American theories of economic development abroad while keeping Soviet technocratic expertise at bay. In both processes, they cast a newly independent, non-aligned India as an example of the putative dangers of communist expansion and a key site, therefore, for the implementation of medicalized family planning. As a result, by the end of the 1950s, population control became firmly consolidated as a global movement in which India operated as a nodal location for demographic and biomedical research as well as international interactions among policymakers, foundations, and scientists.

2.5. India "is where the pressure is greatest": Constructing Cold War India as an Exemplary Site for Family Planning Research and Implementation

The year between 1948 and 1949 was a decisive one for American demographers who found themselves at the crossroads of theory and policy in a context of shifting international relations. While prior to 1948 the United States government's concerns about the global reach of Marxist-Leninist ideology were restricted to the Soviet Union, the "fall" of Chiang Kai-Shek's nationalist, Kuomintang (KMT) government to Mao Zedong's Communist Party of China (CPC) galvanized new concerns among demography's powerful patrons about postwar geopolitical relations and demography's role in understanding them (Greenhalgh 1996). The OPR's demographers were in the thick of these developments; indeed, Notestein, Taeuber, and the Rockefeller Foundation mission were traveling in China during the final stages of the KMT's ouster (Szreter 1993). Pivoting their attention to regions of Asia and the Pacific, where China

and the Soviet Union loomed large, U.S. foreign policymakers and foundation officials began to ask new questions about the role of population dynamics in spurring or thwarting the establishment of communist economic and political systems in those regions. While demographers had only recently refashioned classical demographic theory to make claims about the relationship among fertility regulation, economic development, and modernization in low-income regions, the events of a few short months in 1948 had cast doubt on the assumption that modernization would proceed hand-in-hand with democratization.

For leading American demographers, this was an opportunity to legitimize the place of proactive fertility regulation in economic development. In a multi-year study on India that was commissioned and funded by the U.S. Department of State's Office of the Geographer, Kingsley Davis, by then an associate professor at Columbia University, argued that mortality rates in India were declining faster than fertility rates and, by his calculations, India would witness substantial increases in population growth in the following decades (Notestein 1982). Likening such growth to "a frankenstein" (Davis 1951b:220), he cautioned that this would set the stage for the rise of totalitarian regimes with "completely planned economies" in the style of Stalinist planning (Hodgson 1983:18). In his final publication on the study, a 1951 book titled *The Population of India and Pakistan,* Davis reiterated his new faith in a "direct" approach to curtailing fertility in order to avert this fate, including government-led family planning programs and the dissemination of effective contraceptive technologies among citizens. For Davis, this was a complete turnaround from his position on Indian population policy six years prior (Davis 1944).

Davis's warnings about fertility and the political economy were not isolated arguments. Notestein corroborated Davis' statements in his public presentations and writings (1950:98). At a conference for agricultural economists and food planners in 1952, he provided a step-by-step

explanation of why he believed a totalitarian fate awaited India and how demographic insights could be applied to "problems of the peace" there (Notestein 1982:665; Szreter 1993). The longer the time lag between mortality rate decline and fertility rate decline, he explained, the longer it would take for the economic gains of industrialization and urbanization to be parlayed into further capital growth (Notestein 1953). Notestein's explanation was in line with the prevailing model of macroeconomic growth in postwar American economics, which saw capital formation as its key determinant (Szreter 1993). Moreover, he argued, India's situation was unlike the situation in the first European countries to industrialize, which were able to sell the products of their industrialized economies cheaply across the world without much competition. In such a scenario of high population growth and global market competition, any economic gains to be made from industrialization in India would, instead, be frittered away on consumption rather than capital creation, and could be expected to accelerate conditions of economic insecurity and sluggish growth. None of this, in Notestein and his audience's views, boded well for democratic peace. Notestein used his time at the podium to deliver an impassioned call for birth control promotion as a way to induce large-scale demographic change and avoid "political explosions."[17] Not unexpectedly, American economists would soon join demographers in studying the presumed relationship between population and the macroeconomy in order to further articulate this relationship in macroeconomic terms, such as GDP.

In this new geopolitical context, the prospect of inducing speedy decreases in fertility rates without waiting for industrialization and urbanization over the longue dureé appeared to demographers and foundation officials to be tailor-made for India. This was the case for a

[17] Notestein, as quoted in Connelly (2006:638).

number of reasons. First was the general receptiveness of a newly independent Indian government to the idea of national population reduction. The powerful Indian National Congress (INC) party, which controlled India's central government for three decades after independence, had been staunchly in support of a holistic program of planned development that included national population control (Connelly 2008). The INC's stated commitments to population management were, in large part, born out of the scientific and technological "optimism" that characterized the political vision of its leader and India's first prime minister, Jawarharlal Nehru, as well as three decades of indigenous intellectual discourse on the applicability of contraception to solving India's social problems (Abraham 1998; Ahluwahlia 2008). Even prior to India's independence in 1947, the INC's National Planning Committee (NPC), chaired by Nehru, had convened a working group under the leadership of economist and eugenicist Radhakamal Mukherjee to design a plan of action in the realm of population. The NPC working group's report stated its faith in free contraception in addition to other modes of spurring demographic change. Finally, when the NPC became the National Planning Commission in 1952, its first Five-Year Plan included an explicit endorsement of population reduction as a national policy goal and priority. This statement was the first of its kind, making India the first country in the world to have an official population reduction policy on its books. Notestein, buoyed up by Nehru's unstinting support of a broad-based population control agenda, waxed eloquent about this turn of events, applauding the "speed with which the Indian government has been moving towards a policy supporting family planning" (1951:254).

Despite Indian government leaders' receptivity to population control, American demographers and economists singled out India's new economic priorities, geographic location, and foreign aid relationships as necessitating coordinated action on the country's population

issues. The Planning Commission's embrace of a Five-Year Plan for its vision of economic development appeared to blend American principles of liberal economics and free trade with models of centrally planned development and the state ownership of capital that were characteristic of Soviet economic thought. Furthermore, the Indian state had pursued an explicitly non-aligned position in the burgeoning Cold War, and would soon become a leader of the global Non-Aligned Movement (NAM) in 1956. As a result, India had become a veritable battleground for the United States and the Soviet Union, which began to seek influence in the country through foreign aid and attempts to impress their distinct traditions of development expertise upon Indian planners.[18] Moreover, India was located in Asia, which, after the political upheavals of 1948 in China, had come to represent an area of strategic concern for American development experts, foundations, and policymakers. Heeding Davis and Notestein's warnings about the implications of unchecked population growth for economic growth in India, these actors became convinced that India was a prime location for the spread of communist ideology—both at the level of popular revolt and the adoption of socialist policies touting economic redistribution and structural change (Szreter 1993). At the 1952 "Conference on Population Problems" in Colonial Williamsburg, which John D. Rockefeller III had convened, economist and American Statistical Association president Isador Lubin asked vehemently, "What is there about India that makes this situation so acute? … I think unconsciously we are scared, and I think we have a right to be. In other words that is where the ferment is taking place. That is

[18] For a rich discussion of the use of foreign aid as a Cold War "weapon" in India as well as American and Soviet technocratic relationships with Indian economists and planners in the postwar period, see Engerman (2013, 2018).

where the pressure is greatest."[19] He went on to caution the meeting's participants, which included Notestein, Davis, and Taeuber, that this pressure could well result in "another political philosophy of life" to take seed in such conditions.[20] The question, according to Lubin, was not merely whether population control would ensure economic growth, but whether it could inoculate countries like India against incipient communist insurrection. Lubin was not alone in making these assertions: in fact, his argument echoed parallel fears among American social scientific experts and foreign policymakers that efforts to stem the tide of communism globally would do well to focus on India (Engerman 2018; Sackley 2012).

The 1950s saw demographers joining ranks with economists to pose this question, focusing their attention squarely on India. Between 1952 and 1958, the OPR would throw itself into research that sought to determine the precise macroeconomic and political gains to be made from proactive fertility reduction. One of the most influential elaborations of this work was OPR sociologist Ansley Coale and University of Pittsburgh economist Edgar M. Hoover's study of population projections for India, funded by the International Bank for Reconstruction and Development and eventually published in 1958 (Coale and Hoover 1958; Notestein 1982). Their approach hinged on simulating population growth rates in two alternate visions of India's future: one in which a direct program had been devised for curtailing fertility rates by half in the next twenty-five years and another in which no "special efforts" were made to do anything to fertility rates (Notestein 1982:666). They concluded that the latter situation would lead to unsustainable increases in India's population and stunt the growth of GNP per capita, whereas the former

[19] Lubin, quoted in Connelly (2006:636).

[20] Ibid.

would alleviate population pressures on the national economy if executed appropriately, thereby allowing capital to be funneled into industrialization, social welfare, and private accumulation. In the former, they reasoned, India would brook no inkling of political upheaval.

Coale and Hoover's simulation-based study employed Raymond Pearl's experimental approach from three decades prior, inaugurating the tradition of what Hodgson (1983) has termed "futures" research in demography and tying it explicitly to concerns over the macroeconomy. The study gave credence to the notion that demographers and economists could make reasonably accurate predictions about the effects of projected population growth rates on the macroeconomy and, therefore, on a population's capacity to thrive within that economic context, much like Pearl had attempted to do with his fruit flies. In controlling for all other socioeconomic and demographic variables considered relevant but varying the existence of direct efforts to curb fertility, their simulation took the form of a controlled experiment—only this time with simulable humans and GNP figures instead of insects. This novel emphasis on prediction veered sharply from demography's longstanding reliance on historical census data, causal inference, and historical explanation, strengthening in the early 1960s due to the growing use of computing technologies in statistical research (Szreter 1993).

More important, however, Coale and Hoover's experimental "treatment" of concern—direct fertility regulation—resuscitated Pearl's earlier hints at, and now Notestein and Davis's beliefs about, the capacity of contraception to stall the worst effects of rapid population growth. While historical studies of demographic change, until then the norm, had been unable to discern the independent effects of relevant variables on fertility declines, Coale and Hoover's simulation controlled for everything but the existence of a program of direct fertility regulation. Isolating this variable of concern reflected the current state of discourse on proactive measures against

population growth among prominent demographers, especially but not limited to those who had made their way through the OPR.

At the same time, the U.S. federal government was undecided on the prospect of popularizing birth control abroad, given the fraught atmosphere surrounding the legal status of contraception and feminist birth control activism the United States itself (Gordon 2002; McCann 1999; Oakley 1977; Szreter 1993). American foreign policymakers and representatives to the UN were quick to quash debates on birth control promotion as an international policy position, at times threatening the withdrawal of U.S. funding to concerned UN agencies. As a result, two requests that the Indian government made of the UN Population Commission and the World Health Organization to study fertility planning and contraceptive techniques in India were stopped in their tracks (Connelly 2008).

As I analyze in the next section, there the federal government and international organizations would not tread in the 1950s, however, foundation officials and university demographers ventured, convinced that India was "the cauldron in which mankind would be tested" (Connelly 2008:171). Realizing that the U.S. federal government could not be counted on to back studies of fertility regulation, they channeled foundation funds towards three broad classes of action that would continue until the middle of the 1970s: training demographers and graduate students in the social sciences in the U.S. and India; creating new biomedical research agendas in contraception; and coordinating with Indian policymakers to construct new institutions of demographic research in India, promote family planning policies, and execute family planning programs.

2.6. Creating a Population Control Agenda: Private Foundations, the Indian State, and the "Clinic Approach" in the Indian Population Control Program

By the end of 1952, a sea change had occurred in American demographic thought and American philanthropists' concerns over overpopulation in the "developing world." Fertility regulation through contraceptive technology now occupied a central place in a new biopolitical agenda for economic development, aided by the scholarly efforts of a tight-knit network of American social scientists. Furthermore, the Indian government had officially committed itself to a national population management policy with an explicitly economic rationale, tasking the new Minister of Health, Rajkumari Amrit Kaur, with designing a centrally coordinated population control program that could be implemented at the state level. This pioneering act had stitched national reproduction to the national macroeconomy, releasing social scientists' new understanding of development from the confines of published scholarship and into the realm of policy. Although India's Five-Year Plan had only committed 6.5 million rupees—around $1,440,000—for family planning over the next three years, a small sum relative to other outlays for the Ministry of Health, it nevertheless represented a turning point in how national governments defined and pursued economic development (Connelly 2008).

As much as this moment was a global crossroads, the Indian Planning Commission's favorable attitude towards fertility regulation was not unprecedented for the Indian context. As noted above, India had already witnessed three decades of transnational and local birth control activism on its own shores (Hodges 2004, 2008). Moreover, colonial India had seen the opening of the world's first government-sponsored birth control clinics in the princely state of Mysore as well as some of the world's first birth control clinics in general, such as A.P. Pillay's birth control clinic in Bombay. Against this backdrop, local neo-Malthusian groups, eugenicists, and

members of the All India Women's Congress (AIWC), a prominent middle-class women's group in colonial and independent India, had proclaimed robust support for access to contraceptive technologies and techniques (Ahluwahlia 2008). Likewise, in the 1930s and 1940s, Indian economists, social scientists, and political leaders had campaigned for a "broad-based" approach to planned development in the country, which included access to free contraception, the removal of barriers to intercaste marriage, and sterilization in addition to education and industrialization.[21] Finally, Indian economic planners and experts in the late 1940s had encountered American demographic discourse in international arenas, which transformed their concerns over population quality into simultaneous investments in reducing population quantity. Yet whereas British colonial administrators' avoidance of discussions on birth control had made it difficult for global actors to mount a sustained program of action in the colony, a receptive independent government promised a more welcoming atmosphere. At the same time, in prioritizing population control and family planning as national policies, Nehru's central administration departed from the new Soviet line on those issues as the U.S.S.R had formally disavowed state-sanctioned fertility limitation policies after World War II and was staunchly opposed to international population control efforts (Connelly 2008).

American demographers and their patrons first sought to establish independent institutions for demographic and contraceptive research in the United States, which were both organizationally distinct from the federal government and the university setting, and funded largely through private foundation funds. Immediately after the Conference on Population

[21] It should be noted that early arguments for sterilization in the Indian context were also eugenic in nature. Early postcolonial India's sterilization policies at the central and state levels called for sterilizing the "unfit" and those with communicable diseases, such as leprosy (Buckingham 2006; Connelly 2008).

Problems at Colonial Williamsburg, John D. Rockefeller III, Frank Notestein, and Frederick Osborn convened a committee to chart a path for such an institution, which resulted in the formation of the Population Council. The Council's new office opened in New York that year and was located in close proximity to the national headquarters of the Ford and Rockefeller Foundations, both of which were its primary sources of funding over the next three decades. During the 1950s, the Population Council—which was bifurcated into a Biomedical Division and a Demographic Division—was one of a handful of independent institutions in the world sponsoring and conducting global research on family planning and contraception with a view towards population control (Notestein 1982; Takeshita 2011). Given the UN and the U.S. government's initial reservations on birth control promotion as population policy, Population Council staff would attempt to fill the demographic and biomedical void, coordinating country-specific studies with national institutions in India and elsewhere and becoming a global leader in population research. In addition, Margaret Sanger convened the International Planned Parenthood Federation (IPPF) in 1952 at a conference in New Delhi, recruiting British eugenicist and population control proponent Carlos Paton ("C.P.") Blacker to head the new organization. With Rama Rau and India's vice-president Sarvapalli Radhakrishnan in attendance, Sanger and Blacker were sanguine about the IPPF's capacity to promote research on birth control in India's new policy environment (Connelly 2008).

At the same time, professional social and biomedical scientists constituted the bulk of executive staff at these new institutions, thereby ensuring a revolving door between them and the academy. While Rockefeller and Osborn were the first presidents of the Population Council, in 1959 Notestein would take over the post, directing the Council's global activities and priorities for the next decade. New additions to the staff included Dudley Kirk, who was tapped to head

the Council's Demographic Division in 1954 after finishing his stint as population expert at the federal Office of Intelligence Research; Sheldon Segal, a biochemist, embryologist, and reproductive scientist, who became an on-the-ground consultant in India to the Council's Biomedical Division in 1956; prominent public opinion scholar and political scientist Bernard Berelson, who would later help infuse communications expertise into the Council's family planning research; public health scholar Marshall C. Balfour; social scientist Wayman Parker Mauldin; and Christopher Tietze, a physician and pro-choice activist in the United States, who became the director of the Biomedical Division in 1967.

Given the meager outlay for family planning in India's first Plan, the Population Council decided that the best course of action in the interim would be to do what its scholarly staff already did best: train graduate students in demographic and biomedical research related to population management and fertility regulation. Notestein had already been campaigning to ratchet up the numbers of "locally trained personnel" in India (Notestein 1982:666) even though "some of the research, of course, would be pretty bad."[22] The Population Council's first coordinated activities, therefore, centered on its vaunted Fellowship Program, which provided between ten and fifteen fellowships annually over the next five years to American and non-American graduate trainees enrolled in accredited social and biomedical science programs. In India, the Council had decided that the Directorate General of Health Services (DGHS) at the Ministry of Health would be in charge of selecting fellows. Competition for fellowships was high, and Council staff would later seek some measure of discretionary control over who

[22] Notestein, quoted in Connelly (2006:636)

received them by stationing a Council liaison in the DGHS's selection committee meetings.[23] By 1957, the Council had already trained thirty-two fellows, twenty-five of them from outside the United States, predominantly India (Connelly 2008). Indian fellows would take a year or two of coursework culminating in a final thesis or coauthored study, at first under Notestein's direction at Princeton's OPR and later at a number of demographic institutions across the United States, including the Center for Population Studies at the University of Michigan and the Community and the Chicago Family Study Center (CFSC) at the University of Chicago.[24] After studying at American institutions, fellows would typically return to India to take up scholarly positions in universities and research institutes or bureaucratic positions in the family planning departments of the central and state governments. These included Kumundini Dandekar, P.S. Mohapatra, and Dinesh Dubey, all of whom would come to occupy positions of influence in these networks.

Beyond simply training Indian graduate students in family planning research, the Fellowship Program embedded American models of economic development and demographic transition theory among Indian experts and policymakers. Taking as their core premise the notion that fertility regulation was paramount to economic development, Notestein and his university

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[23] Notestein, "The Work of the Population Council," December 16, 1960, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 796; Letter from Mauldin to Raina, September 28, 1961, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 797; Letter from Kirk to Raina, January 4, 1964, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 797.

[24] Notestein, "The Work of the Population Council," December 16, 1960, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 796; Letter from Mauldin to Raina, September 28, 1961, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 797

colleagues saw to it that fellows constructed the kinds of studies that asked and answered questions based on this relationship. They also ensured that their conclusions could be applied to programmatic policy and engaged in new methodological techniques in the discipline that had developed in response to this theoretical shift, for example, surveys on contraceptive use, experimental studies of the effects of birth control promotion programs on birth rates, and comparative studies of various contraceptive technologies and their rates of adoption.[25] When fellows returned to India, these questions, techniques, and policy-oriented conclusions drove their design of local research studies and served to enhance the status of direct fertility regulation in state-led family planning programs.[26]

In addition to providing graduate training in demography, the Population Council accelerated stagnant contraceptive research agendas in the American reproductive sciences, which would indelibly shape the politics of medicalized birth control in India and globally over the next three decades. In the first half of the twentieth century, research on "modern" contraceptive technology in the U.S. had proceeded in fits and starts. Indeed, up until the middle of the 1950s, when Margaret Sanger and wealthy heiress Katherine McCormick procured funding for endocrinologist Gregory Pincus to study hormonal contraception, there were few coordinated programs of research in this field. As Adele Clarke (1998) has analyzed, this was the case for three interconnected reasons: gendered practices of research in the biomedical sciences,

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[25] Ibid.

[26] Letter from Balfour to Sovani, July 14, 1958, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 808; Letter from Ronald Freedman to Raina, December 26, 1962, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 797.

a corresponding lack of legitimacy for the reproductive sciences in general and contraceptive research in particular, and attendant gaps in funding for contraceptive research.

Under the influence of Notestein, a vanguard of the new focus on direct fertility control, the Population Council's Biomedical Division revived this latent agenda. With a sizeable grant of $540,000 from the Rockefeller Brothers Fund in 1956 and an additional $1.6 million from the Ford Foundation in 1959, the Division would launch research into a long-acting contraceptive that could bypass many of the "problems" the Council saw as inherent to mechanical and topical contraception: continuous "motivation" on the part of the user, less "effectiveness" in curtailing conception, and misuse (Connelly 2008; Takeshita 2011). A long-acting, provider-controlled technology, Council representatives and researchers believed, would dispel the need for continuous motivation and transfer control over fertility regulation from unreliable users to expert medical providers, thereby leading to greater contraceptive effectiveness. In 1961, the Council's biomedical laboratories would publicize one of the first postwar prototypes of the modern IUD, which Council representatives, in concert with their Ford Foundation liaisons in New Delhi, went about field-testing in the Indian states of West Bengal and Uttar Pradesh as well as in Taichung, Taiwan in the early 1960s.

Finally, American demographers and their wealthy patrons began to work independently with Indian cabinet ministers and policymakers to coordinate field and experimental studies on family planning and contraceptive use in India, construct local institutes for demographic research, and promote the implementation of family planning policy on the ground. Here, the Ford Foundation, Rockefeller Foundation, and Population Council took the lead. As early as 1953, the Rockefeller Foundation made a three-year grant to Harvard University demographers to study whether the introduction of new contraceptive technologies—in this case, spermicidal

foam tablets—influenced residents' adoption of contraception in the town of Khanna in the Indian state of Punjab (Williams 2014). A year later, the Ford Foundation made its first grant to the Population Council in the sum of $600,000, a portion of which was used to fund the construction of the Demographic Training and Research Center (DTRC) in Bombay, the first research institute in the country to focus solely on demography and population studies. Building on the momentum set by the Council, the Ford Foundation's representative in India, Douglas Ensminger, helped bring Notestein and New York Commissioner of Health Leona Baumgartner to India to consult with the Ministry of Health on population control. Although Minister of Health Rajkumari Amrit Kaur was more averse to promoting technological birth control than the Nehru-led Planning Commission, favoring the rhythm method instead, she was altogether receptive to Notestein and Baumgartner's suggestions that the Ministry devote more funds towards the training of local social scientists and family planning program personnel, including doctors, nurses, bureaucratic staff.[27] This was a bold step for Kaur, who had until then been a longtime associate of Mohandas Karamchand Gandhi—"Mahatma" Gandhi—and, therefore, sympathized with his views favoring sexual abstinence and denouncing "artificial" birth control. Finally, a preliminary report from Ansley Coale and Edgar Hoover's study on India fomented additional concern about the issue among Indian planners and policymakers: when it was sent to the Indian government in 1956, forecasting unsustainable population growth if direct fertility control measures were not taken, the Planning Commission responded with an almost ten-fold increase in outlays for family planning in its Second Five-Year Plan of 1956 to 1961.

[27] Oral history, Douglas Ensminger, October 21, 1971, Rockefeller Archive Center (hereafter, RAC), FA744, Ford Foundation Records, Box 1, Series A.

With the Second Five-Year Plan, the Planning Commission doubled down on direct, state-led sponsorship of family planning and birth control, to a great extent due to its close interactions with private foundation officials and American demographers (Harkavy and Roy 2007; Sackley 2012).[28] The Commission introduced an increase of 4 million rupees annually in outlays for family planning and pledged the opening of 2,500 clinics in the country by 1960 (Planning Commission 1956). Furthermore, a separate Central Family Planning Board (CFPB) was created within the Ministry of Health to oversee programs related to family planning and coordinate action at the state level. Former Chief Medical Officer of the Indian Army Corps, Colonel B.L. Raina, was selected as the director of the new Board. By 1959, Raina had overseen the construction of over 600 family planning clinics, which, given bureaucratic delays in the central government, a political tug-of-war between the Ministry of Health and the Ministry of Finance, and Kaur's general skepticism of birth control, was an impressive feat. By 1961, that figure would climb up to an estimated 4,000 (Harkavy and Roy 2007).

The "clinic approach" to population programs that Raina and the CFPB initiated was notable for its contribution to the medicalization of population control in early postcolonial India, in which medical devices, techniques, and experts were viewed as paramount to stemming the population crisis. The approach focused predominantly on the provision of sterilization services, particularly tubal ligation for women. One of the main activities of the CFPB and state family planning divisions in this regard was training staff that could perform sterilizations, including doctors and auxiliary nurse-midwives. In addition to sterilization, clinics made topical and mechanical contraceptive technologies accessible to its patients, including diaphragms and

[28] Ibid.

cervical caps, indigenous and foreign-manufactured condoms, and spermicidal foam tablets and suppositories. In many ways, this medicalized model was dovetailed with American demographers' claims at the time about the powerful role of direct access to fertility control technology in jump-starting economic development, as well as their conviction that people in India and other non-Western countries were, in fact, "rational" beings who desired access to "simple" and "effective" contraceptive methods in order to plan childbearing (Davis 1951a, 1954, 1955a; Greenhalgh 1996; Hodgson 1983).[29]

From 1951 to 1959, the Ford Foundation had sponsored the creation of sixteen new demographic programs in the country, which also began to coordinate with the Population Council's Demographic Fellowship program. In 1959, under the influence of Douglas Ensminger in the Foundation's New Delhi field office, the Foundation's Board of Trustees decided to officially enter population research and implementation abroad, green lighting a family planning and population wing in the New Delhi field office (Hewa and Stapleton 2005). At the Population Council, other organizational changes were afoot. Notestein took over Frederick Osborn's position as president of the Council and, in this capacity, began to chart a more formal agenda for demographic and family planning studies to commence in India.

2.7. Conclusion

By the late 1950s, therefore, "direct approaches" to fertility regulation came to be the regnant view among demographers, economists, and proponents of global population control in

[29] Davis' arguments about the "rational peasant" in India and elsewhere drew on a small survey of Indian women in a rural agrarian community. For an extended discussion of this view of "rationality" in demographic scholarship in the 1950s, see Hodgson (1983).

the US. This view had reversed the causal argument in classical demographic transition theory. What would have been an implausible line of reasoning two decades prior—that fertility rates act independently on and are not derivatives of economic development—was now championed by the theory's progenitors. In this formulation, "direct approaches" referred to government-led efforts to expand citizens' access to contraception and, thereby, regulate fertility at the point of conception. Flush with private foundation funding, demographers sought to set the terms of their research within this new understanding of fertility decline. In addition, demography's leading scholars and their students now hewed to the field's carefully constructed policy orientation (Hodgson 1983). Moreover, as this chapter has shown, much of this demographic about-face hinged on views about India, its population crisis, and the specter of communist expansion within its borders.

Demographers' new focus on state-sponsored fertility regulation was based on demographers' initial convictions that the demand and desire for simple and effective contraceptive technologies already existed among people in agrarian and low-income countries. Optimism about the attractiveness of accessible contraceptive methods ran high among those at the Population Council, Rockefeller Foundation, and Ford Foundation, as well as university demographers (Hodgson 1983).

The transformation of American demographic scholarship and the reorganization of the field's relationships to foreign and domestic political agencies, however, did not proceed without internal critique. Some dissidents of the "direct approach," including university demographers, graduate students, and policymakers attempted to question the new focus on fertility control and its policy implications, asking, for example, whether women's education was also a moderator of contraceptive use and, therefore, whether programs to increase women's educational

participation would do more to increase contraceptive use than merely increasing the availability of contraception. These dissidents included Princeton's Irene Taeuber, whose early advocacy of women's education as a pathway to modernization in the developing world found a handful of receptive audiences in the late 1940s. Yet these alternative theoretical paths did not get institutionalized, in part due to the hold that more established OPR faculty and OPR-trained demographers had over published scholarship and extramural funding.[30] Likewise, while a handful of American demographers and graduate students took umbrage with demography's evolving attempts at "social engineering" in low-income countries, their attempts to spark critical dialogue were systematically quelled.[31]

Although the recasting of demographic transition theory had substantial implications for the practice and institutional status of American demography, it also provided a considerable impetus to contraceptive research. As historians and sociologists of science have shown, contraceptive research was viewed as an illegitimate and unproductive course of study in the life sciences during the first half of the twentieth century (Clarke 1998; Takeshita 2011). Postwar population control advocacy, however, meant that contraceptive research found an unlikely source of support in American demographers and their private foundation patrons. Their

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[30] For an extended discussion of how the question of women's education as a determinant of fertility declines was foreclosed in American demography and population control discourse, see Connelly (2008). Irene Taeuber, at one point the only woman demographer at Princeton's OPR and for a long time one of the only leading demographers in the US who was a woman, was a proponent of studying the impact of women's education on fertility rates. Yet her male colleagues' predilection for contraceptive policy overshadowed Taeuber's work.

[31] On internal critiques of demographer's policy bent, see Greenhalgh's (1996) discussion of the student-led journal *Critical Demography* and its demise. University of Chicago demographer Philip Hauser's spirited yet isolated critiques of mid-century demography as "social engineering" also departed from his contemporaries' goals to shape population policy; see Greenhalgh (1996) and Hodgson (1983).

promotion of direct fertility regulation was a welcome turn of events for American birth control activists, many of whom, such as Margaret Sanger and Marie Stopes, had until then led the charge for contraceptive development but were plagued by intermittent monetary and academic resources. Demographers' promotion of fertility regulation conferred a certain degree of legitimacy on academic contraceptive research, as effective technological birth control now appeared as a *prima facie* solution to looming population crises. Together, demographers, birth control activists, and private donors helped inaugurate a program of research on hormonal contraception and efforts to devise a long-acting, intrauterine contraceptive device, which would eventually culminate in the first versions of the oral pill and modern IUD.

As the next chapter demonstrates, however, this focus on the development and dissemination of effective technological contraception and the augmentation of family planning clinic infrastructures would come under increased scrutiny in the late 1950s and early 1960s. By 1959, experts, policymakers, and foundation officials in India and the U.S. began to harbor concerns about the capacity of family planning clinics to bring about large-scale reductions in fertility rates. These concerns would prompt demographers to look elsewhere for insights into how to remedy the putative "failures" of the clinic approach. Settling on theoretical approaches from the interdisciplinary study of mass communication, demographers would begin to argue that increasing access to contraceptive technologies and services would be useless unless people had the "motivation" to use them. In turn, they asserted that this motivation could be enhanced by using mass communications to persuade people of the benefits of birth control and change public opinion on family size. The technoscientific debates that ensued over mass communications as a solution to the shortcomings of the clinic approach would eventually alter the course of the Indian population program in the Third Five-Year Plan of 1961-1966.

More important, however, the new science of family planning communications would stitch together the governance of gender and reproduction with American geopolitical aims. Demographers' reconceptualization of population size as a determinant of entire political economies would lay the groundwork for American family planning communications experts to claim that particular communicative practices, family formations, and reproductive and sexual ideologies could help sustain the behavioral conditions for macroeconomies based on the principles of capitalist democracy. These conditions included private capital accumulation with the "achievement-oriented" and "change-oriented" small nuclear family, economic redistribution through nuclear family relations rather than extended kinship relations or structural wealth redistribution, and widespread beliefs in the intrinsic "manipulability" of one's life conditions. In this way, the new science fielded population control as a route towards capitalist democratization, and not merely quantifiable economic growth. To experts in the new science, persuasive mass communications on birth control would not only help decrease birth rates but also, and more crucially, create citizens with particular beliefs about sex, reproduction, and the family. Arguments for population limitation in India would thereby come to rest on behavioral techniques for transforming the reproductive attitudes of the vast majority of India's rural and urban poor and reengineering their familial relations—both of which experts argued would go far to advance the United States' geopolitical aims

CHAPTER 3

"Problems of Communication and Motivation": The Communication Sciences and the Remaking of Family Planning Expertise

"The family planning problem is mainly one of providing motivation, not one of finding a more perfect contraceptive."

Everett Rogers (1973), communication scientist and sociologist

3.1. Introduction

As Chapter 2 showed, demographers were fairly optimistic about the intrinsic potential of medical and biomedical contraception to effect population reduction. This faith in preexisting demands for birth control in India and elsewhere found a willing audience among members of the Indian Planning Commission and the Director of Family Planning, Col. B.L. Raina, who launched a series of initiatives to augment family planning clinics around the country. At the same time, demographers' evidence for this demand had been culled from a few dispersed locations and a slew of anecdotal experiences in a handful of Asian countries, including Japan and India. Referring to India, Kingsley Davis, for example, had argued that agrarian communities needed only come into contact with widespread access to contraception to reason its economic and social benefits for their families (Hodgson 1983). In this scenario, the access to simple and effective contraceptive methods was the policy "problem" to be tackled—once the issue of access was resolved, contraceptive use and reductions in birth rates could be expected to follow.

Social scientists' faith in a preexisting yet "unmet" demand for birth control in India and

other non-Western regions was short-lived. Between 1959 and 1962, in the wake of new census data from India and institutional realignments at American population research organizations, a new technoscientific debate emerged among American and Indian population control proponents over whether accessibility and availability of contraception was, indeed, sufficient to spur its use. The bulk of these of these doubts were raised by scholars who expressly identified as "communication scientists"—an interdisciplinary community of social and behavioral scientists committed to the idea that mass communication was both an important explanation for and driver of social change—as well as demographers who had begun to draw on communications scholarship to ascertain the social psychological contours of fertility dynamics (Whelpton and Kiser 1953). As a field, the communication sciences was a vital contributor to the "behavioral turn" in American social science at the time but, like demography, was similarly concerned about its scholarly relevance in a postwar world (Crowther-Heyck 2006; Pooley 2016; Simonson and Park 2017).

In this chapter, I show how, together with influential philanthropic foundations, American communication scientists and their adherents in demography argued that a widespread and explicit demand for contraception did not exist to the extent previously assumed. They hoped to convince policymakers and the broader population control research community that in the absence of this demand insights from the behavioral science of mass communication could bridge the apparent chasm between the availability of contraceptive technologies and tangible decreases in population growth rates. The research field that coalesced in response would eventually come to define its subject matter as "family planning communications." According to communication scientists such as Everett Rogers, quoted above, the mere availability of contraceptive technologies could not be expected to guarantee reductions in population growth

rates. In their view, reproduction was not only a biological phenomenon that could be made subject to medical and biomedical regulation: it also entailed cognitive and social "behaviors" involving information sharing, communication, and decision-making that governed how people made particular reproductive and sexual decisions. It followed, therefore, that large-scale "behavioral change" was the missing link between the availability of contraceptive technologies and tangible reductions in population growth. To communication scientists, contraceptive accessibility was meaningless unless people believed in the putative virtues of smaller families, had knowledge about contraception and possessed the requisite psychological "motivation" to practice contraception consistently. Consequently, communication scientists reiterated their faith in the power of mass communication to inform, persuade, and motivate people to develop different attitudes and engage in new behaviors—in this case, developing favorable attitudes towards smaller families and using contraceptives. Put simply, communication scientists defined fertility control as not merely a matter of regulating bodies and organs, but also, and perhaps more significantly, of regulating public opinion.

At the same time, like their demographic forebears, family planning communication scientists legitimized their arguments using proximate Cold War anxieties about global security, but recast them in behavioral scientific terms. They argued that people who could envision the economic benefits of planned reproduction and were motivated to engage in such planning were psychosocially "suited" to life under democratic capitalism. Citing mid-century theories of modernization and infusing them with behavioral scientific definitions of the "achievement-oriented" and "change-oriented" democratic citizen, communication scientists defined the practice of contraception, "husband-wife communication," and planned conception as exemplary traits of modern nuclear families in democratic and capitalist societies. In doing so, they would

provide a powerful set of justifications for the notion that small nuclear families were the building blocks of modern democratic life.

Accordingly, family planning communication scientists connected gender, reproduction, and familial relations to the geopolitics of communist containment and democratization, casting population control, therefore, as a battle for "hearts and minds." They argued that mass publicity on the economic virtues of planned conception and small nuclear families would not only give people a compelling reason to practice contraception: it would also, and perhaps more importantly, create a modern democratic citizenry that believed in the manipulability of its life conditions and valued "striving" for socioeconomic uplift. While the earliest demographic and economic arguments in favor of population control had painted it as a preemptive check *against* communist expansion, communication scientists saw birth control publicity as a constructive route *towards* democratic and capitalist modernity—a technoscientific approach that would go beyond simply reducing birth rates to secure broader American geopolitical goals.

3.2. Behavioralism and The Study of Mass Communication in American Social Science

A brief consideration of the rise of behavioralism in postwar social science illustrates the how and why communication scientists enter population control discourse to weigh in on how fertility could be best governed. First, the communication sciences were closely aligned with the "behavioral turn" in American social science (Farr 1988; Hauptmann 2016; Pooley 2016). Their commitment to behavioralist approaches meant that they would bring distinct visions of social scientific methods, principles, and objects of study to emerging debates on population control and fertility regulation, thereby casting those debates in behavioralist terms. Second, communication scientists had close institutional and scholarly relationships with research donors

that had historically advocated for both the behavioral sciences and population control, particularly private foundation officers. I analyze each of these contexts in turn below.

The stirrings of the "behavioral revolution" in American social science date to the 1930s and 1940s when a new generation of interwar and wartime social scientists—predominantly in sociology, social psychology, and political science—broke from prevailing disciplinary methods concepts, and explanatory frameworks. Its fitful institutionalization in the academy occurred after World War II in the 1950s, predominantly under the auspices of private foundations and aided by university administrators, the Social Science Research Council (SSRC), and federal government agencies.

While the definition of behavioralism is debated among historians and social scientists, it is generally understood as a set of principles for the study of society that emphasized observable and measurable behavior, the search for patterns and regularities, verification of hypotheses, methodological individualism, and statistical empiricism and reasoning.[32] As a general scientific approach, it was centered on the pursuit of generalizable theories of human "behavior"—conceptualized as the cognitive universe of human attitudes, opinions, values, preferences, and decisions—through statistical and experimental analyses of "observable" empirical data. These two characteristic features of behavioral scientific thought—quantitative methodology and the generalizable explanations of aggregate human behavior—were an outgrowth of its overarching

[32] The term "behavioralism" is distinct from the term "behaviorism." The latter refers to principles in the social psychology of stimulus-response conditioning, most often associated with psychologists B.F. Skinner and Ivan Pavlov. On the contrary, behavioralism was first identified as an intellectual movement in the 1930s within American sociology, political science, and social psychology towards studying society and politics as functions of aggregate behaviors and states of mind; see the essays in Steinmetz (2005a) for a discussion of the social sciences' move towards positivist empiricism in the twentieth century.

goal to promote a "proper study of mankind," as popular author and social theorist Stuart Chase termed it. Here, social psychology, with its disciplinary commitments to understanding humans in cognitive scientific terms, informed behavioralist agendas (Cohen-Cole 2014; Herman 1995).

Importantly, behavioralism was predicated on a new object of study—the "mass public"—and the kinds of questions, theoretical explanations, and conceptual innovations that this object made possible (Igo 2008). Behavioralists understood the mass public as an aggregate of atomized individuals who could be expected to act in predictable and standardizable ways. As Sarah Igo analyzes, the new generation of quantitatively-oriented social scientists created the notion of the "average" individual whose behavior could be plotted in relation to the mean and median of a sample of observed data and who could, more importantly, "stand in for the whole" (2008:19). In doing so, behavioralists departed from prevailing commitments in sociology and political science at the time, which focused on historical, institutionalist, and ethnographic modes of analysis and generally shied away from making claims in social psychological terms (Hauptmann 2012). Put simply, behavioralists championed the view that the mass public and the interchangeable individuals that constituted it could be "known" best by what they thought, believed, and valued. Thus, their attempts to provide generalizable theories of the mass public proceeded counter-intuitively by analyzing individual human behavior at the micro-level, while pushing considerations of historical, political, and institutional factors into the background.

From a methodological standpoint, behavioralists' new goals necessitated large sets of quantifiable information that could be subjected to statistical analysis and, thus, fulfill the mathematical requirements of such analysis. As a result, they resorted to increasingly sophisticated survey methods and, when applicable, experimental analyses to gather, measure,

and analyze behavioral phenomena. The valorization of large data sets went hand in hand with the interwar-era and wartime evolution of survey research at the nexus of academia, business, mass media, and campaign polling (Igo 2008; Hauptmann 2012, 2016). Not surprisingly, the main American backers of behavioral science research in the 1930s and 1940s were the federal government, the military, businesses, and commercial broadcasters, all of whom had distinct interests in "knowing" their respective constituencies of concern: the citizenry, other nation-states, consumer markets, and media audiences.

Early behavioral scientists' preoccupation with knowing the mass public dovetailed with the rise of "new" mass media, including radio and television, from the 1920s through the 1940s. Taken together, the methods and theoretical axioms of behavioralist social science presumed that the mass public was both shaped by and brought into being, in large part, through such media. The growing ubiquity of these media in various realms of social and political life, such as political campaigns and commercial advertising, suggested to social scientists that mass information could be exerting a powerful and measurable influence on a mass public opinion, attitudes, and values on various political, economic, and social issues. The study of mass communication's impact on public opinion thus occupied a prominent position in behavioralist research.

As such, the "communication sciences," as it came to be defined during World War II and the immediate postwar period, were both product and protagonist of the behavioral turn. Some of the earliest communications scholars in the U.S. staked their academic careers on establishing new paradigms in American social science—ones that centered on mass communication as an explanation for and driver of social change, as well as emphasized rigorous quantitative empiricism in an effort to approximate natural scientific inquiry (Glander 2000; Park

and Pooley 2008; Shah 2011; Simonson 2010; Solovey 2004). The field led a motley existence: the earliest empirical studies of mass communication flourished in political science and sociology in the 1930s and 1940s and, later, in stand-alone communications departments.[33] As historians of communication study have noted, this cross-disciplinarity was unsurprising: indeed, communications scholars assumed—even championed—the relevance of mass communication to understanding a plethora of social and political phenomena (Glander 2000; Pooley 2016; Simonson 2010).

Private foundations' early and enduring support of behavioralist communications research in the 1930s and 1940s not only shaped the content of this research but also amplified the relationships among foundation representatives and communication scientists. Skeptical of the political and commercial connotations of these early attitude studies and media research, disciplinary departments were loathe to procure or promise intramural resources for communications research (Glander 2000; Solovey 2013). During this time period, the bulk of funding for communication scientific research came from private foundations, such as the Rockefeller Foundation and Carnegie Corporation, and often from commercial industries. Using these private funds, sociologists, social psychologists, and political scientists conducted some of the first large-scale, survey-based studies of voting behavior and political opinion formation, the impact of mass media advertising on American radio audiences' consumer preferences, and the psychological profiles of soldiers in the military. Aware of the tepid reception of behavioralist

[33] Communications scholar Wilbur Schramm was largely responsible for establishing the Institute for Communication Research at University of Illinois Urbana-Champaign in 1947 and another at Stanford University in 1955. Schramm and his student David Berlo also helped establish the first degree-granting communication science department at Michigan State University in 1957. See Glander (2000) on Schramm and the creation of independent communications studies departments.

communications research in the core disciplines, foundation officers and trustees worked independently of departmental channels to establish communications research at universities. They often chose to work directly with university administrators to set up stand-alone interdisciplinary research centers or programmatic projects, such as the Princeton University's Office of Radio Research (ORR) in 1937, which was soon transferred to Columbia University and renamed the Bureau of Applied Social Research (BASR). By doing so, foundations could not only bypass potential objections from departmental chairs and faculty but also dictate the terms of the research to be conducted. As a result, although mid-century communications research acquired significant funding, it was often housed in extra-departmental units and, therefore, somewhat disconnected from its disciplinary counterparts. This also meant that communications research was from its inception a manifestly interdisciplinary field, and was viewed as such by its progenitors.[34]

World War II was an important turning point for communications researchers, who found themselves shuttled from the periphery of the core disciplines into the national spotlight. The renewed focus on political and wartime propaganda through mass information gave communication scientists a readymade rationale for the significance of their scholarship to national concerns, helping launch a government-sponsored line of research into "psychological warfare" while also thickening the dense web of relationships among scientists, private donors, and federal government agencies (Glander 2000; Pooley 2016; Simpson 1996). Many leading communications scholars and their social scientific sympathizers were hired to assist, consult with, and conduct research in US wartime agencies. They included Bernard Berelson, who

[34] Letter from Elihu Katz to Norman Storer, August 30, 1966, RAC, FA021, Social Science Research Council Records, Record Group 2, Accession 2, Series 1, Subseries 39, Folder 2137.

worked for the Foreign Broadcast Intelligence Service of the Office of War Information (OWI) analyzing German propaganda, public opinion, and morale during the war; sociologists Samuel Stouffer and Leland DeVinney and psychologist Carl Hovland, who were recruited by the head of the U.S. Army's Information and Education Division to perform survey research on soldiers' attitudes towards combat and the war for the Division's Research Branch; BASR director and sociologist Paul Lazarsfeld, who consulted with the OWI and War Department, and helped design survey tools for Stouffer's soldier studies; political scientist Pendleton Herring, who would become the chief architect of the 1947 National Security Act after the war; and sociologist Donald Young, who was the chief of the Research Branch in the Army's Information and Education Division, and worked alongside Stouffer, DeVinney, Osborn, and Hovland. Additionally, key foundation officers and members of independent social science research councils were recruited to work on wartime information and propaganda studies, which went a long to way to bring communications researchers and private foundations into further contact with each other, while enhancing the reputation of behavioralist research within the core disciplines. These included Frederick Osborn, who had been simultaneously active in population control circles, as well as Young and Herring, who became successive executive directors of the SSRC after the war ended in 1945.

After World War II, the political atmosphere in the U.S. changed considerably, and with it so would the point, purpose, and legitimacy of American communications research. Following the end of the war, many communication scientists working for wartime federal and defense agencies returned to their university and research posts (Glander 2000). Still, the prospect of potentially hostile disciplines and departments prevailed. Much like their demographic counterparts, they did not have to wait long to encounter newly hospitable conditions for their

work. Ubiquitous fears of global communist expansion due to an escalating Cold War led to foreign policy approach anchored in communist containment, while national security became an overriding concern for the postwar federal government. Here, definitions of containment were not restricted to the territorial and political expansion of communism but also involved its ideological reach. To government agencies, private foundations, and social scientists, therefore, effective containment policies took seriously the content and character of mass information and media.

In this charged context, the communication sciences' utility to new national security agendas appeared obvious. For the former, the Cold War was viewed as fundamentally a matter of knowing foreign and domestic public opinion and their ability to be shaped in desirable and undesirable ways by mass communications (Glander 2000; Solovey 2013). Consequently, communications scholars began to argue that the utility and relevance of their prior research was not restricted to wartime concerns, but could be successfully applied to Cold War-era attempts to secure the U.S. state's "peacetime" prerogatives. What was only a few years ago a rationale for securing public support for the unusual and extreme circumstance of war morphed into a broader effort to safeguard the ordinary conditions of democracy and national security. Ironically, in this formulation, both wartime and peaceful applications of communications research employed the same means: studying the "effects" of mass communication on public opinion so that political leaders and credentialed experts could proactively shape such opinion through the strategic use of mass information. When behavioralist communications research faced scrutiny by McCarthyite congressional committees intent on exposing social science for its presumably left-leaning aspirations, communications scholars emphasized the presumably "objective" empiricism of their research to distance themselves from charges that they were attempting to

incite domestic socialist revolution. In doing so, they would manage to fend off the heaviest censure while reframing their research as necessary to influencing foreign public opinion in favor of the United States and liberal democracy (Solovey 2013).

From 1947 through 1959, therefore, communications researchers began to reap the benefits of a resource windfall, spearheaded by the same private institutions and government agencies that had backed communications research during World War II (Crowther-Heyck 2006). This funding was used to establish university programs, conduct research, and train graduate students in applying behavioral scientific approaches to social and political issues. Put simply, these efforts were focused, as Berelson noted, on investing in the "basic resources of the behavioral sciences—in ideas, in methods, in men, and in institutions."[35] By the late 1950s and early 1960s, communication science research was represented in numerous research domains, including military research on psychological warfare, public opinion and voting research, rural sociology, and studies of agricultural extension (Converse 1987; Farr 1988, 1995; Glander 2000; Igo 2008; Simpson 1996; Sproule 1997; Pooley 2008; Rohde 2013; Seybold 1980). It had also made a profound mark on international development wherein the subfield of "development communications" built on parallel intellectual shifts in the social sciences towards modernization theory, emphasizing the centrality of mass communication to the creation of "modern" values and social structures in the global South (Bah 2008; Shah 2011; Solovey 2013).

Alongside funding research and creating new institutions for it, foundation officers also helped the behavioral revolution to gain legitimacy among independent social science committees and organizations, in particular the SSRC. By the mid-1950s, the Ford Foundation

[35] Berelson, quoted in Solovey (2013:128).

would become the single largest donor for the SSRC, contributing to almost half of its annual budget (Solovey 2013). Likewise, the Carnegie Corporation would not only fund but also chart the direction for SSRC-sponsored communications studies and public opinion research. Trustee Frederick Osborn, for example, would ensure that Stouffer and Hovland's wartime survey research in the Information and Education Division's Research Branch would not lay fallow in the hands of military agencies, arranging with ex-Research Branch officer Donald Young for the data to be "transferred" to the SSRC under the oversight of an independent SSRC-led committee but bankrolled through Osborn's personal funds (Hauptmann 2016). Under Donald Young and Pendleton Herring's postwar leadership, the SSRC would shift from an organization that was deeply suspicious of behavioralist, quantitative research on mass communication into one that gave it a principal position in the organization's plans for the postwar period, thereby increasing its prestige among wary disciplinary departments.

Of the communication sciences' private donors, the wealthiest trifecta of foundations—the Rockefeller Foundation, the Carnegie Corporation, and the Ford Foundation—were far and away the most generous. As already noted, many foundation officers that had helped fund communication scientists in the interwar period worked closely with them in federal wartime agencies; the Cold War and the U.S.'s new foreign policy rationale served to further tighten those connections. Flush with resources after World War II, the Ford Foundation took the lead among other donors, largely through its "Behavioral Sciences Program" (BSP), which communications scholar Bernard Berelson both designed and directed from when it was conceived in 1951 to when it was shuttered in 1957 (Glander 2000; Solovey 2013). Indeed, many communications scholars and historians have credited the Ford Foundation—specifically Berelson and the BSP—with formalizing "behavioral sciences" as a descriptive term and, in

doing so, carving out institutional niches for the continuation of mass communications research (Hauptmann 2012). Under Berelson, the BSP was responsible for over 300 grants totaling upwards of $43 million to behavioral science and communications research, as well as instituting the Center for Advanced Study in the Behavioral Sciences (CASBS) (now officially located at Stanford University), one of the first of its kind to be devoted specifically to this new scholarly outlook (Solovey 2013). Berelson would consult with the leading communication scholars and survey researchers of the day in the lead-up to and during the tenure of the program, including Paul Lazarsfeld, Robert Merton, Samuel Stouffer, Hans Speier, and Donald Marquis.

In this way, the dense web of fiscal relationships, institutional linkages, and scholarly collaborations among private foundations and interdisciplinary communication scientists during the early Cold War meant that both sets of actors saw eye to eye on supporting behavioralist approaches to understanding social phenomena.[36] These relationships would eventually prove crucial to foundation representatives' capacity to enlist communication scientists into foundation-backed population control and family planning research. Once part of those conversations, communications experts would convince population research organizations and adherents of classical demography that behavioralist perspectives on mass communication were necessary to both understand and resolve the problems of purely clinical approaches to population control, such as those in India.

3.3. A New Technoscientific Debate: Contraception and Clinics Under Scrutiny

[36] Elihu Katz, "Proposal to: National Science Foundation, Advanced Science Education Program (ASSP)," n.d., RAC, FA021, Social Science Research Council Records, Record Group 2, Accession 2, Series 1, Subseries 39, Folder 2137.

By the middle of India's Second Five-Year Plan, the Indian Planning Commission had begun preparing for less than encouraging news from the 1961 decennial census. Initial census tabulations showed that the Indian government's population projections for 1961 were almost 10 million short of the actual number (Connelly 2008; Gille 1961). Adding to the Commission's frustrations was the niggling sense among Indian family planning officials and population policymakers that the clinic approach of the first two Five-Year Plans was not having its desired effects. First, estimates suggested that, by 1959, only around 700 clinics had opened. Furthermore, the clinics that did open and the district-level bureaucratic agencies that coordinated them were regularly understaffed. The central government had identified rural areas, where close to eighty percent of India's population lived and primary health care was virtually non-existent, as key places for the popularization of family planning. It proved difficult, however, to persuade physicians and nurses from urban and semi-urban areas to move to rural regions, a hindrance that would affect the Indian sterilization program for the next decade. Moveover, there was often only a single physician and nurse for several thousand people in a given district, and the training that medical personnel did receive was short and of questionable quality. In addition to personnel shortages and training issues, clinics were beleaguered with low attendance rates and state government officials became noticeably "impatient" with these results (Connelly 2006). Additionally, as Director of Family Planning Colonel Raina and state family planning officials had observed, even when occasional clinic attendees did walk away with barrier-based and spermicidal contraceptive technologies, such as condoms and suppositories, they typically did not return for more, which suggested intermittent and sporadic use (Gupta, Sinha, and Bardhan 1992).

Finally, the allocation of executive power over family planning programs appeared to

have exacerbated issues in governmental coordination on the ground. While healthcare had been classified constitutionally into the "State List" as an item for states to manage and direct, population control and family planning had been placed in the "Concurrent List" as items over which both the central and state governments shared executive power but that would be managed on a daily basis under the healthcare system. Given the bureaucratic entanglements that this organizational and executive set-up entailed, coordinating family planning personnel, clinical activities, and training were continuously hampered with delays (Harkavy and Roy 2007). To circumvent these delays, the central government partnered with local non-governmental organizations to distribute family planning funds to clinics and oversee their use, in particular the Family Planning Association of India (FPAI), which Rama Rau had founded in 1949. Officials were so skeptical of the clinic approach that, for the first time since the beginning of the program, the Planning Commission began considering setting numerical targets for population reduction in the Third Five-Year Plan, which was slated for announcement in 1960.

In this atmosphere of skepticism around the clinic approach, Indian officials had also begun to view sterilization as a potentially effective technique in the large-scale implementation of a state-led approach to population control (Gopalaswami 1962). The states of Madras and Maharashtra had already begun to experiment with incentive payments for those who underwent sterilization, a scheme that provoked heated debate at international family planning and population control conferences between 1958 and 1960 for its blurring of the lines between indirect coercion and voluntary acceptance of contraception (Gopalaswami 1962; Kiser 1962). Even so, officials in charge of such schemes wondered whether people would be interested in undergoing the procedure at established clinics, with or without an incentive attached. At the Sixth International Conference on Planned Parenthood in New Delhi in February 1959, Indian

demographer and Population Council-funded researcher Chidambara Chandrasekharan went on the record to state that "although there is definite indication that both in the urban and rural areas the desire for the small family is spreading, the strength of such motivations is not very clear."[37]

Meanwhile, back in the United States, the Population Council was moving quickly behind the scenes to ascertain how and why the Indian program and its clinic approach appeared to be "failing." The issue of whether family planning clinics were "effective" or not (Stycos 1962) thus involved interrogating the assumptions behind demographers' optimism about fertility regulation. While, only a few years earlier, demographers had assumed that contraceptive practice could be expected to follow increases in contraceptive accessibility—a view based on further assumptions about the existence of a healthy "desire" for contraception in low-income regions—the Indian situation appeared to be a thorn in their side. The question now facing demographers, population planners, and wealthy donors was: did such desire actually exist on the ground and, if not, could scientific scholarship and technological innovation be harnessed to either spur this desire or provide a "detour" around its absence?

During this time period, advocates of the second proposition looked to medical and biomedical research to illuminate such a detour, holding out hope for a long-acting, provider-controlled contraceptive technology that they believed would circumvent issues of "user control" in the clinical context. Many of these advocates, such as obstetrician Alan F. Guttmacher, gynecologist Howard C. Taylor, obstetrician-gynecologist Jack Lippes, embryologist and

[37] Chidambara Chandrasekharan, "Cultural Factors and the Propagation of Family Planning in the Indian Setting," FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 786.

biochemist Sheldon Segal, and physicians Warren O. Nelson and Christopher Tietze were consultants, committee members, division heads, and researchers in the Population Council's Medical Division (which was later renamed the Biomedical Division). Some, such as Guttmacher, simultaneously occupied executive positions in international and national family planning organizations such as the Planned Parenthood Federation of America (PPFA) and Planned Parenthood-World Population (PP-WP) while others, such as Taylor, wove a web of private foundation monies from the Ford Foundation and Population Council to jumpstart the production and evaluation of long-acting contraceptives.

The contraceptive technology of choice was the IUD, the most recent iteration of which had fallen out of favor with potential users. In the middle and late 1950s, Guttmacher and his colleagues at the Council launched an inter-organizational research program to modernize the IUD, a technology that he believed would go beyond "birth control for the individual"—user-controlled technologies such as the oral pill, condoms, and others that required sustained use—towards "birth control for the nation"—provider-controlled, long-acting technologies that did not presume a continued "desire" and capacity to monitor short-acting contraceptives on the part of users (Nelson and Guttmacher 1962:7). Guttmacher laid out these new terms of the fertility regulation debate in a personal letter to the pharmaceutical manufacturer Gideon Searle, who was worried that the IUD would displace his company's oral pill formulation, Enovid, then under review at the Food and Drug Administration. "IUD's," Guttmacher explained, have special application to underdeveloped areas where two things are lacking: one, money and the other sustained motivation… once the damn thing is in the patient cannot change her mind."[38] As

[38] Guttmacher, quoted in Watkins (1998:70).

experiments on various IUD prototypes began to proceed at hospitals and obstetrics departments in New York state, including Mt. Sinai Hospital and the University of Buffalo, it became clear that the experts in the Population Council's Biomedical Division were doubtful that the "typical" woman in agrarian countries had the kind of "sustained motivation" that user-controlled, short-acting contraceptive technologies demanded.[39]

Even though the Council's new experimental program on the IUD was a welcome development among biomedical and medical experts, debates over its feasibility and effectiveness in contexts like India exposed the fault lines of this newfound enthusiasm. At the first and second conferences on intra-uterine contraception that the Population Council sponsored in New York, some participants worried about whether the design of the technology could significantly hamper its placement into the uterus, increase the level of medical training required of the personnel conducting insertions, and cause bleeding, uterine tearing, infection, or expulsion. Others, such as Temple University obstetrician J. Robert Willson, countered these fears by suggesting that infections could be allowed if "the individual patient is expendable in the general scheme of things, particularly if the infection she acquires is sterilizing but not lethal" (Tietze and Lewit 1962:124). When yet other participants sounded warnings about ensuring IUDs were not inserted into patients with contraindications in their medical histories, such as pelvic inflammatory disease, cervical infections, or gonorrhea, Guttmacher enlisted doctors from India to confirm whether agrarian women could be expected to even produce their medical histories, much less display concern about possible side-effects, stating that they "dare not lose of [their] goal—to apply this method to large populations" (Tietze and Lewit 1962:122). Willson

[39] For a detailed discussion of the standardization of the "typical" agrarian woman in IUD research, see Takeshita (2011).

agreed, positing that curtailing the fertility of "60 or 70 per cent of patients" was worth the potential side effects among a smaller subset of women (Tietze and Lewit 1962:125). Likewise, when confronted with the possibility of overburdened and untrained medical staff in low-income countries, Guttmacher called for "fewer restrictions" on IUD insertion protocol "particularly if paramedical personnel will be inserting intra-uterine contraceptive devices" as well as an IUD design that circumvented training in additional medical procedures, such as cervix dilation (Tietze and Lewit 1962:121-122).

Thus, echoing Guttmacher's appeal for "birth control for a nation," these early discussions of IUD development cast *governments* and not women as the ultimate "user" and market for the IUD. Worries about the hazardous complications of a nascent technology and its improper use among medical professionals were transmuted into concerns about whether policymakers in low-income countries could afford *not* taking those risks. Tellingly, only two weeks after the second conference in 1962, a press release from the IPPF proclaimed that the IUD had been shown to be effective and safe, even though no major clinical trial evaluations of the new prototypes had been conducted yet (Connelly 2008). The Council wasted no time in promoting testing the device to policymakers abroad, notably those in Taiwan and India.

What IUD development efforts at the Population Council's Biomedical Division reveal, however, is that medical and biomedical experts were some of the first to highlight the concept of user "motivation" as a potential moderator of mass efforts to regulate fertility in agrarian regions. Not unexpectedly, however, these experts insisted that nothing could be done, at least in the short term, to manipulate user motivation in these regions. This line of reasoning about the intractability of motivational deficits thus attempted to deflect attention away from the individual patient or citizen considering birth control to governments interested in immediate and powerful

solutions to regulate “unmotivated” citizens’ fertility—solutions that they averred could be found in biomedical innovations. At best, proponents of the IUD still presumed the existence of a “basic” level of demand for long-acting, user-independent contraceptives, even if they eschewed the possibility of the kind of sustained motivation required for short-acting, user-dependent ones; at worst, they appeared unconcerned about non-desiring patients being coercively or surreptitiously fitted with IUDs by a overzealous government, much less the injurious consequences of faulty procedures, incomplete medical protocol, and infections.

All the same, eager to not shove the social phenomenon of motivation to the academic sidelines or take the existence of a basic level of demand for granted, demographers and social scientists put the concept of user motivation in the spotlight. While the Population Council’s Demographic Division had organizational investments in the promotion and development of the IUD, they did not share their biomedical counterpart’s vision of and solutions to apparent motivational deficits. Many began to wonder whether the availability of medical and biomedical contraceptive techniques, even of the long-acting or permanent kind, meant anything in the absence of a basic level of demand. According to them, long-acting technologies and permanent techniques still required users to make a voluntary decision to seek out contraception at a clinical facility. In addition, much like Guttmacher and his colleages, demographers and social scientists painted governments as an important user constituency for contraceptive technology. Unlike their medical and biomedical counterparts, however, they honed in not on governments’ interests in immediate solutions but their lack of resources. At the Sixth International Conference on Planned Parenthood, Dudley Kirk, for example, asked whether it might be more prudent—perhaps even expedient—to focus on spurring user motivation to adopt the simpler and cheaper

contraceptives already in circulation.[40] Even if an IUD prototype passed clinical muster, it was unclear to Kirk whether the large-scale application of a device like the IUD could get underway in a country like India, whose government had not only admitted that the clinic approach was inadequate and costly but had also forbidden marketing the new oral pill on account of its unclear side effects and concerns that Indian women would not comprehend its "complex" mechanisms (Chesler 1992:451; Connelly 2008; Marks 2001; Rao 2004).[41] The implications of technological design appeared to be critical for resource-poor contexts where the costs of training medical personnel, administering a program based on medically sophisticated contraception, and dealing with potentially threatening side effects of such technologies on a mass scale would further burden cash-strapped government agencies and non-governmental organizations. Moreover, promoting medically sophisticated contraception in such contexts was especially unpromising if, as Indian policymakers and researchers believed, the basic demand for contraception did not exist on an aggregate level.

Still, demographers and their social scientific colleagues had yet to provide satisfactory and systematic explanations of whether and why this demand did not exist to the extent previously assumed, much less how it could be fanned to promote the continuous use of short-acting and inexpensive contraceptives. Given the short period of time in which the Biomedical Division had drummed up scientific interest in the IUD and the generous funding that the Council had acquired to develop it, Osborn, Mauldin, and Balfour worried that they had not, in

[40] On demographer's concerns about the feasibility of medically sophisticated methods in India, see Kirk's remarks to the Sixth International Conference on Planned Parenthood (International Planned Parenthood Federation 1959) and Kiser (1962:373-386, 477-501).
[41] For a detailed discussion of the Indian state's reluctance to market the oral pill in the twentieth century, see Marks (2001).

fact, been as "aggressive on the demographic side of the Council's activities."[42] As such, social scientists' attempts to tackle the "problems of motivation" in family planning (Kiser 1962) would commence an internecine, cross-disciplinary tussle for scholarly jurisdiction over the population crisis. For demographers and social scientists, failing to pursue this line of research risked disciplinary irrelevance, undermining social science's ability to continue providing meaningful insights on population control and acquiring institutional monies to do so.

In the 1950s and 1960s, therefore, while physicians and biomedical researchers were intent on medicalizing solutions to these problems, social scientists would attempt to *behavioralize* them. In doing so, they would not only reframe the issue of motivation and aim to share prescriptive power with their medical and biomedical colleagues but also enlist a set of distinct scientific perspectives to help elucidate the issue. As I analyze in the following sections, anchoring these new perspectives were insights from the interdisciplinary communication sciences. Established and rising communications scholars in sociology, social psychology, and political science were eager to impress behavioral scientific and social psychological precepts upon family planning research. In the early 1960s, these precepts shaped how demographers and social scientists attempted to resolve the controversial issue of user motivation, indelibly transforming the content and methodology of the demographic research that ensued, while providing new grist for the mill of demographic and social scientific funding. India was at the crux of these debates not only because scientists' attention had long been focused on its program, but also because it was still the only country in the world with an official population management policy and thus represented a potentially favorable context in which to resolve these

[42] Letter from Dudley Kirk to Marshall Balfour, March 12, 1958, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 413.

new debates. As I later detail in Chapter 4, the technological implications of these perspectives, which came to be known as "family planning communications" research, would significantly shift the scope and direction of India's population control program.

3.4. Natal Encounters: The Communication Sciences Enter Population Control Discourse

The Population Council's suspicions about a putative deficit of contraceptive "demand" in low-income regions called for data that would confirm whether this was case. This was a requirement ripe for survey research. It was clear to the Council's president, Frederick Osborn, that if survey research found this demand to be lacking, then some way of engineering such demand needed devising. A lifelong patron of behavioralist communications scholarship and survey research, as well as a witness to their use during World War II, Osborn believed that the next step for the Council was to recruit a "well-qualified man" for each of a number of new initiatives: chair a new Council committee in the "field of communications and motivation," chair a series of conferences on the field's application to population studies, and perform administrative work at the Council to encourage and supervise "considerable" demographic research in the field.[43] Osborn thus reached out to his Army Research Branch colleague, Samuel Stouffer, in April 1959, asking him to weigh in with his own recommendations and stating that he could not "imagine any field in which the social science have a more immediately important part to play."[44] Citing Stouffer's expertise, Osborn averred that "the problems of communication

[43] Letter from Frederick Osborn to Samuel Stouffer, April 6, 1959, RAC, FA210, Record Group 1, Accession 1, Series 1, Box 32, Folder 468.

[44] Letter from Osborn to Stouffer, November 4, 1959, RAC, FA210, Record Group 1, Accession 1, Series 1, Box 32, Folder 468.

and motivation with peasant peoples is terribly urgent, as you well know, and particularly so in the field of population."[45]

Stouffer agreed to meet with Osborn at the next available opportunity. At the time, he was the Director of the Laboratory of Social Relations and Professor of Sociology at Harvard University. In addition, his World War II research had recently been published—due in no small part to Osborn's efforts to wrest control over their data from the military—in a four-part volume titled *The American Soldier,* which was gaining reviews as a preeminent text for survey research in the field of mass communications, motivation, and opinion formation (Ryan 2013). Osborn's suggestion that Stouffer knew the "problems of communication and motivation" among agrarian populations "well" undoubtedly referred to the Harvard Department of Social Relations' longtime status as a home to the progenitors of modernization theory, such as Talcott Parsons (Gilman 2004).

Aside from a close relationship with Osborn, other factors put Stouffer's willingness to address population control into context. First, Stouffer saw the parallels between the prospect of eliciting public support and demand for contraception and his earlier work assessing and helping shape the psychological profile of American soldiers. Osborn and other army officials had used Stouffer's survey research on soldiers to argue that watching persuasive films on the significance of combat could strengthen soldiers' approval of and commitment to World War II (Herman 1995; Ryan 2013). In meetings with the Population Council, Stouffer would immediately advocate persuasive films on the virtues of family planning as a first line of defense against overpopulation. Additionally, during the 1950s and early 1960s there had been a perceptible

[45] Ibid.

uptick in the attention to demography and population control among U.S. social scientists, as well as to the population "bomb" in American popular culture and public discourse (Fig. 2 and 3). Demographers such as Kingsley Davis had crossed academic boundaries into popular discourse, joining journalists in periodicals such as the *New York Times* and the *Saturday Evening Post* to author articles that informed American readers of population crises in India.[46]

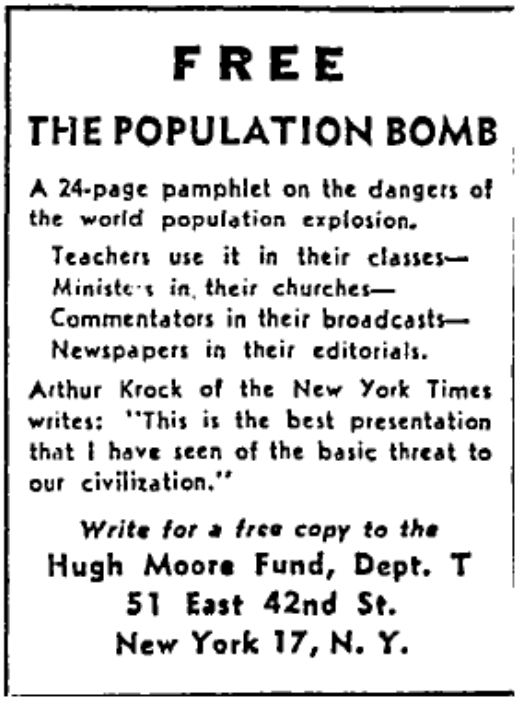

Figure 2. Advertisement for one of the Hugh Moore Fund's many pamphlets on "The Population Bomb," in wide circulation in the 1950s and early 1960s and funded by the Dixie Cup founder and eugenicist Hugh Moore. Source: Display Ad 175, *New York Times,* October 11, 1959.

[46] Kingsley Davis, "Analysis of the Population Explosion," *New York Times,* September 22, 1957; "The Other Scare – Too Many People," *New York Times,* March 15, 1959; Milton Silverman and Margaret Silverman, "Land of Too Many People," *Saturday Evening Post,* September 19, 1959.

Figure 3. Advertisement on the Campaign to Check the Population Explosion, which utilized a popular cartoon from one of Hugh Moore's pamphlets in the 1950s. Source: *New York Times,* n.d.

These articles often spoke candidly about the putative national security dangers that overpopulation posed to the U.S. and the conditions for communism that it appeared to breed, going so far as to state that "a runaway inflation of people in the underdeveloped nations is not in our national interest" (Fig. 4).[47] Indeed, the very night of Stouffer's first meeting with the

[47] Kingsley Davis, "Analysis of the Population Explosion," *New York Times,* September 22, 1957.

Council on November 11, 1959, *CBS Reports* aired an hour-long documentary on population growth in India, hosted by journalist and radio personality Howard K. Smith. After over 9 million people tuned in that night, the film was rebroadcast in early 1960 with an extra half hour of footage and a half a million more viewers (Fig. 5; Parry 2013:48). Council staff would discuss the CBS film for weeks afterward, even writing approvingly to Raina in India about how the film would go far to increase public support in the U.S. for family planning, contraception, and global population control.[48]

In his meetings over the next six months with the Population Council's Demographic Division, which included Osborn, Notestein, Mauldin, and Kirk, Stouffer upended the terms on which fertility control had been discussed until then. Although he was circumspect about assuming that contraceptive demand did not exist in agrarian countries, he turned the conversation around immediately to methods of creating this demand. Not only was he in favor of distributing printed materials on contraceptives, but he also called visual media such as films and television a "promising medium" for eliciting heightened interest in family planning.[49] Furthermore, Stouffer was convinced that it was not enough to pull from the general literature on communications. Instead, he advised Council staff to consult "analogous materials distilled from the experience of related programs concerned with trying to overcome the colossal apathy of the

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[48] Letter from W. Parker Mauldin to Colonel B.L. Raina, October 30, 1959, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 795; Letter from Mauldin to Raina, November 13, 1959, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 795

[49] Office memorandum from Mauldin to Frank Notestein and Dudley Kirk on "Conversation with Sam Stouffer, December 9, 1959," December 11, 1959, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468.

masses and intruding into their personal habits," such as agricultural extension and community development, both of which made use of theories of the effects of mass communication on

decision-making, technology adoption, and attitudinal change.[50] These included the theory of the "diffusion of innovations," which had originated in the influential 1943 "Ames Study" of the

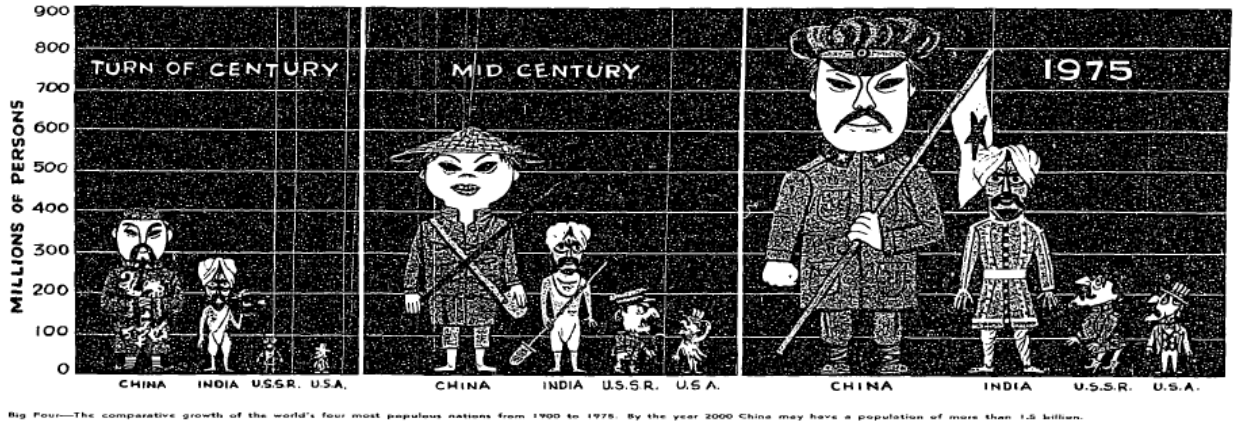

Figure 4. Graphic that accompanied one of Kingsley Davis's articles in the *New York Times*. Source: *New York Times,* March 15, 1959.

adoption of hybrid corn seed in Iowa in response to a concerted information campaign (Ryan and Gross 1943), as well as the theory of "opinion leadership" or the "two-step flow of communication" model, articulated in the collective works of Berelson, Lazarsfeld, and sociologist and communications scholar Elihu Katz in the 1940s and 1950s.[51]

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[50] Ibid

[51] Samuel Stouffer, "Some Cocaine Vagaries of S.A.S," Transcription by Population Council Staff, August 16, 1960, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468; Samuel Stouffer Diary Notes, July 1960, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 469;

It only took two meetings for Osborn and Notestein to personally invite Stouffer to chair the new communications committee at the Council as well as a series of Council-sponsored conference panels on the "problems of motivation" relevant to family planning.[52] Stouffer agreed immediately, moving quickly to secure a year of leave from Harvard to join the Council's staff in New York that fall. In the interim, he traveled to Jamaica and Puerto Rico to observe the experimental and survey research being conducted by an important newcomer to the field, demographer and communications scholar Joseph Mayone Stycos. Meanwhile, the Council staff sent Stouffer a slew of materials to bring him up to speed on demographic literature of the last decade, including the 1950 Rockefeller Mission report on Japan, Notestein and Baumgartner's 1955 report on India, and a selection of papers on field studies of contraceptive acceptability that

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Mauldin Diary Notes, March 25, 1960, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 796.

[52] Letter from Notestein to Stouffer, May 13, 1960, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468; "Conference *on Study of Motivation* Relevant to Fertility Control," May 29, 1959, RAC, FA108, John D. Rockefeller 3rd Papers, Record Group 5, Series 1, Subseries 2, Box 82, Folder 680; Kiser (1962).

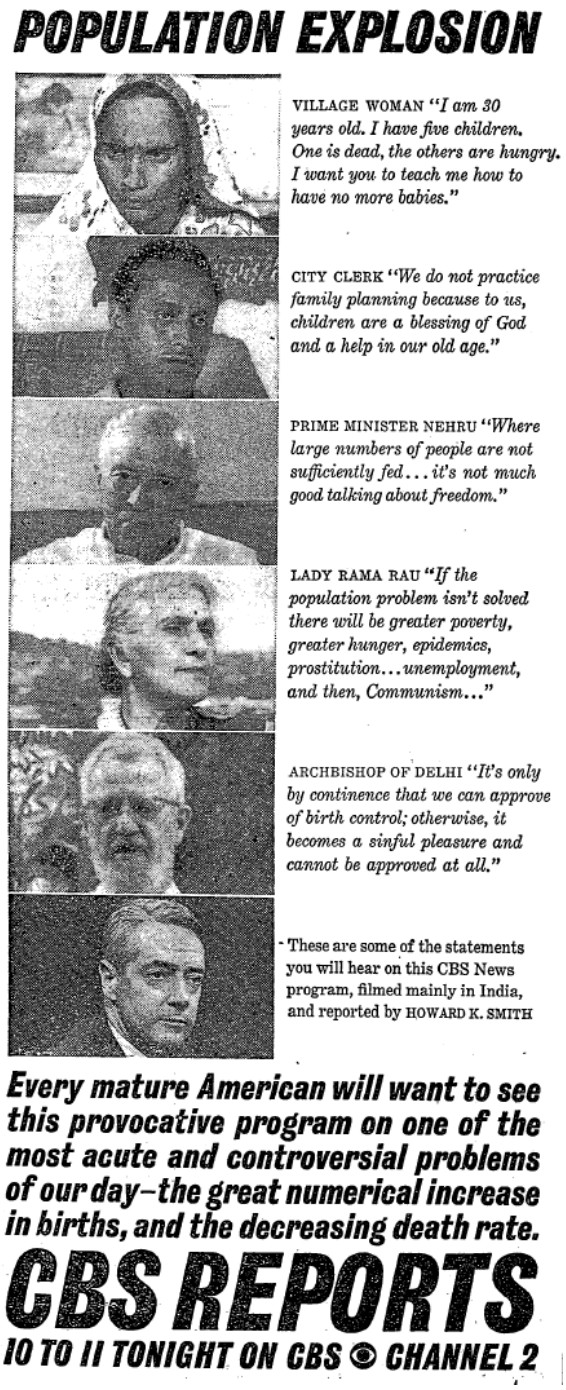

Figure 5. Advertisement for the *CBS Reports* "Population Explosion" documentary. Source: Display Ad 58, *New York Times*, November 11, 1959.

had begun in India and the Caribbean region with Council funding.[53]

Stouffer's appointment to the Population Council's executive staff was no small matter: as a towering figure in postwar sociology and communications research, his presence signaled the seriousness of the Population Council's intent to promote behavioral scientific approaches to the population crisis. Given Stouffer's close ties with Osborn and the Ford Foundation's now-shuttered Behavioral Sciences Program, his appointment reflected the strength of those institutional connections and the impact they would have on the Council's attempts to address the "motivational" problem in family planning. When Osborn resigned in May 1959, Notestein, as the Council's new president, would ensure that those relationships continued to produce staff for the new communications initiative.

While visiting Jamaica and Puerto Rico, Stouffer found a promising ally in Stycos, whose work exemplified new points of connection between demography and the study of communication.[54] Self-identified as a "sociologist with research training in social demography and public opinion analysis," Stycos was a rising scholar at the Department of Sociology at Cornell University and was helming a series of novel studies in the Caribbean region, including Puerto Rico and Jamaica, on attitudes towards family planning and the influence of mass and

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[53] Letter from Kirk to Stouffer, January 5, 1960, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468; Letter from Mauldin to Stouffer, January 8, 1960, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468; "Materials Sent to Sam Stouffer," n.d., RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468

[54] Office memorandum from Mauldin to Frank Notestein and Dudley Kirk on "Conversation with Sam Stouffer, December 9, 1959," December 11, 1959, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468; Letter from Stouffer to Kirk, March 3, 1960, RAC, FA210 Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468.

interpersonal communication on the adoption of contraception (Hill, Stycos, and Back 1959:25). He had begun this research as a doctoral student at Columbia University, where, under the tutelage of Kingsley Davis, Paul Lazarsfeld, and Robert Merton, he had learned to apply the study of public opinion and mass communication to address new demographic arguments about direct fertility regulation as a development policy. In Puerto Rico, he had been systematically surveying people on their attitudes towards sex, reproduction, and family size, while conducting experimental programs to determine whether mass media materials and interpersonal communications between trained fieldworkers and community members could encourage the latter to adopt contraception. Some of Stycos' studies in Puerto Rico and Jamaica had investigated whether birth control communications had stimulated interest in either sterilization or a product named "Emko," a new spermicidal foaming jelly that was marketed in those regions during the late 1950s and early 1960s.[55] The Council invited Stycos to be part of Stouffer's steering committee and a panelist at a conference on "Research in Family Planning" later that year, which it was jointly sponsoring with the Milbank Memorial Fund (Kiser 1962).

Although it might not been evident to the Council's seasoned demographers, Stycos was part of a small but determined group of recently minted graduates in sociology, social psychology, and demography that was attempting to parse out the "social and psychological factors affecting fertility" (Whelpton and Kiser 1953; Westoff 1955). Their studies were united in the goal to assess what people believed about sex, the family, and reproduction, and how they made decisions about engaging in sexual and reproductive behaviors. The bulk of this research, much like the communications research of the 1940s and 1950s, was conducted at private

[55] On the history of the production of Emko and its promotion in Puerto Rico and Jamaica as a technological tool for population control, see Bourbonnais (2016) and Löwy (2016).

foundations, led by foundation staff with social science doctorates, or at stand-alone university centers devoted to population research. This included the Indianapolis Fertility Study, the data from which demographer Clyde Kiser of the Milbank Memorial Fund, Pascal Whelpton of the Scripps Foundation, and sociologist Charles Westoff of the Princeton OPR had begun to analyze. Other studies, such as Stycos's Puerto Rican surveys and experiments, were conducted in close collaboration with foreign university social science departments and public health agencies, with a view to contribute to the growing interest in family planning and global population control among American demographers.

Stouffer hoped to publicize these scholarly developments as well as the Council's new communications initiative by moderating a session related to communication and motivation at the conference. Conference participants included a number of leading demographers, sociologists, and biomedical researchers, such as the University of Michigan sociologist Ronald Freedman, Alan Guttmacher, and Christopher Tietze, as well as policymakers and researchers from India and other non-Western countries, such as Chidambara Chandrasekharan, R. A. Gopalaswami, and Kumundini Dandekar (Kiser 1962).

Although Stouffer died two months before the conference, two of the session's papers generated a great deal of discussion among conference participants by questioning the effectiveness of family planning clinics at popularizing birth control in India and other regions, while providing a "solution" to the clinic approach's apparent failures.[56] Particularly strident in

[56] Although his untimely death prevented him from contributing much more to the new research field, Stouffer was uncommonly committed to his new interest in population control. Only a week before his death, he was found writing several pages of notes on the use of mass communication in family planning while in an opioid-induced stupor after a painful bronchoscopy; Samuel Stouffer, "Some Cocaine Vagaries of S.A.S," Transcription by

his critique was University of Chicago demographer and budding family planning communications scholar Donald J. Bogue. Bogue was a leading researcher in American demography and director of the Community and Family Study Center (CFSC) in Chicago. In four short years, he would go on to found the discipline's flagship journal *Demography* and be elected president of the Population Association of America. Referring to India in his presentation, Bogue (1962:503) wondered why clinics were not having their intended purpose:

> "As yet, the program of family planning in India has not produced the results that sponsors and friends hoped it would when it was launched. Despite the opening of many family planning clinics which distribute contraceptive materials without charge to couples who care to apply, and making physicians and trained social workers freely available to give family planning advice and help, the number and percentage of couples who are availing themselves of family planning services and information is discouragingly low […] One cannot help asking the question, "Why is not the family planning idea taking root and sweeping the nation?""

These comments dovetailed with his thoughts in another report on the clinical approach in Pakistan:

> "Despite [the] long list of auspicious factors [that shape clinics' effectiveness], the actual performance of general medical and public health clinics as family planning service units often has been disappointing. For example, efforts to establish a large-scale family planning program through already-established medical clinics has [sic] led to a low-level of success in Pakistan. Attendance has been low; drop-outs have been high; costs have been large in

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Population Council Staff, August 16, 1960, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468.

comparison with results; little if any effect on birth rates has been observed, even after years of operation" (Bogue, Rogers, and Klinger 1966:2).

Stycos, Bogue's co-panelist at the conference, provided an answer. He openly asked his audience, "Are clinics effective?" taking issue with what he believed were the "medical" and "middle class biases" of the prevailing "Planned Parenthood approach" (Stycos 1962:482). These features of the clinic approach, in his view, meant that clinics placed inordinate emphases on individual patients as opposed to collectivities. Citing his ongoing work in Puerto Rico, he asserted that this approach was not working in places characterized by fewer resources and where policymakers' immediate goals were to reduce population growth rates on an aggregate level.

Bogue and Stycos went on to frame the ineffectiveness of the clinic approach in the terms of "knowledge," "attitudes," and "practice."[57] Based on their collective empirical and anecdotal evidence from low-income regions, they argued that people in developing countries had ambivalent if not negative attitudes towards family planning, had little knowledge of the purported virtues of contraceptive technologies, and did not possess the sustained desire to practice contraception even when contraceptives were made available to them. Echoing the late Stouffer in a separate publication, Bogue and his colleagues went on to suggest that, "the public must be *sensitized* and *informed* before they will take action. The mere establishment of a clinic does nothing to make them sense the need for family planning or to give them knowledge" (Bogue, Rogers, and Klinger 1966:3; emphases in original). Bogue, Stouffer, and Stycos' lack of

[57] These terms would later be used to name a new type of social psychological-demographic survey that sought to catalogue behavioral and attitudinal data related to family planning: the "Knowledge-Attitude-Practice" (KAP) survey. The term "KAP survey" would be used interchangeably with the term "Knowledge-Attitude-*Motivation*-Practice" (KAMP) survey.

faith that people would adopt contraceptive technologies even if made available stood in contrast to the rationales of "unmet need" and "basic" contraceptive demand that had helped legitimize contraceptive development and delivery to begin with, and to which Guttmacher, Tietze and their Biomedical Division colleagues had tied their new IUD program. Nevertheless, it would appear that while the notion of unmet need had served an important legitimizing function for contraceptive research, it contradicted social scientists' contention that the desire to contracept had to, in fact, be "created" on a mass scale on the ground. In contrast to the presumptions about "unmet need," they asserted that the motivation to use contraceptives was not as widespread or concrete as previously believed but far more nebulous and uneven. Without this motivation, even an effective long-acting IUD, however widely available, would be rendered ineffectual.

This contradiction in terms highlights the shaky discursive terrain on which population researchers found themselves. More importantly, however, it set the context in which social scientists contended that mass communication held the key to stimulating the desire to contracept where none had existed before. Stating, for example, that he was no "*bona fide* communications expert, but merely a sociologist who has devoted some time to reading the literature in this field," Bogue asserted that instead of merely building more clinics and stocking them with contraceptives "what is called for is an ambitious supplementary program of communication and motivation which will employ the best principles and most effective techniques for stimulating attitude change and promoting active use of contraceptive procedures" (Bogue 1962:504). In effect, Bogue and Stycos were attempting to recast reproduction as a behavioral phenomenon. To them, a family planning program that privileged the mere provision of contraceptive technologies and services but disregarded behavioral techniques for regulating reproductive

attitudes and decision-making processes was a myopic approach that was doomed to fail. Likewise, population research that did not privilege the study of such attitudes and decision-making processes as well as how they could be modified would be increasingly incapable of assisting governments in program design.

While Bogue's modesty was not out of place—until that time he had devoted his career to studies of urban migration and classical demography—he and his graduate students at the CFSC had just won a number of competitive grants from the Population Council, Rockefeller Foundation, and Ford Foundation to conduct studies on the impact of mass communication on reproductive decision-making in the U.S. Along with his students, he would launch a concerted effort to convince "[d]emographers concerned with the population explosion and with the best ways of spreading family planning ideas" to "take explicit notice of… communication, since it is a crucial variable intervening between attempts to reduce birth rates and actual success" (Palmore 1967:273). In a few short years, Bogue would come to dominate the field of family planning communications and command a substantial set of resources to conduct experiments on and surveys with low-income African American and white families in Chicago, Kentucky, Alabama, Mississippi, and Tennessee.

By casting doubt on the effectiveness of the family planning clinic and what they believed was a myopic race to develop new contraceptives, Stouffer, Stycos, and Bogue had ushered population research under the behavioral scientific umbrella. As a result, the concept of "motivation" would become the linchpin on which communication scientists pegged mass communication as the right tool for the job of population control.

To examine the role of motivation in contraceptive use, communication scientists asserted that population researchers would have to prioritize the task of understanding *how* and *why*

people were drawn to contracept. This task was a matter of understanding fertility in social psychological and behavioral terms and framing theoretical conclusions in alternative ways. "The key to understanding fertility," according to Stycos and his co-authors Reuben Hill and Kurt Back, lay in observing and analyzing the "decisions," "values," and "methods" by which individuals and families "perceive and solve their problems" (Hill, Stycos, and Back 1959:2-4). As such, they believed that behavioralist research like theirs would illuminate "a body of generalizations… that may be used as guideposts in the quest for the social psychological antecedents of success in family planning" (1959:30), as it had the "distinction of viewing population control as a phenomenon of family planning and action" (1959:2; emphasis added).

Additionally, early family planning communication scientists were keen on their research informing state-led programs to reduce population growth. They lamented, early and often, that mainstream demographic research with its prevailing focus on historical explanation was ill equipped to provide meaningful insights into *how* to best construct proactive, large-scale interventions into fertility. These voids in social science research on population, coupled with presumptions about unmet need, had allowed the clinic approach to become the default model for government intervention. Stating that mainstream research was "difficult to translate into practical programs of action," Stycos, Hill, and Back called on demographers to become acquainted with behavioralist perspectives so that they could weigh in on how governments could shape their citizens' opinions and actions regarding reproduction and the family. Believing that "population control by means of fertility limitation can be a useful adjunct of economic reform" (Hill, Stycos, and Back 1959:23), they were committed to learning "how this process can be speeded up through a broad program of formal and information education… and through public discussion of the basic issues of family size and family limitation" (1959:4).

In turn, framing population control in psychological terms and "bringing back the findings to the policy and program level" necessitated the application of altogether novel methodological techniques for data gathering and analysis (Hill, Stycos, and Back 1959:41). If the task was to ascertain how people held certain values and made decisions about fertility, then researchers needed to conduct comprehensive surveys of those values and decisions and determine how they were correlated with other phenomena of interest. Furthermore, if the task was to ensure that research could inform policy, then researchers needed to design and execute experimental research to "[discover] why families act as they do about fertility planning and how they may be induced to change" (1959:41). Communication scientists thus advocated the quantitative verification of hypotheses about fertility values and decisions using representative surveys, as well as the "rigors of a controlled experiment" to isolate potentially effective ways of intervening in those values and decisions (1959:41). "These methods, if undertaken on a mass scale," Stycos and his collaborators believed, could help "constitute a government program of action" (1959:41) while transforming the scope and content of demography as an academic field.

These arguments, however, proceeded in explicitly gendered terms. In contrast to the focus of their fellow biomedical experts on women and female-oriented contraceptives, communication scientists shifted the conversation around to men. Bogue and Stycos, for example, claimed that men, not women, were the primary "decision-makers" in developing countries, and typically more exposed to mass communication and mass media than women were. If direct fertility regulation were to succeed in such contexts, then scientists and policymakers would have to take men's role in decision-making and male-oriented birth control methods seriously (Stycos 1962). In his view, clinics' exclusive orientation towards women, coupled with their inattention to the motivational aspects of fertility decision-making, was failing

to spur the large-scale adoption of contraception that policymakers in low-income countries so desperately sought. Stycos thus found it "reasonable to conclude that the uncritical exportation of traditional Planned Parenthood ideas to other countries will almost certainly fail in the short run, and may well be irrelevant in the long run" (Stycos 1962:501). Social scientists' gendered definitions of decision-making in non-Western countries shaped their theories of reproductive behavior and policy suggestions, much of which advocated orienting family planning communication efforts towards men and male methods like condoms and vasectomies. Chapter 5 analyzes this important and overlooked history of emphases on men in early social scientific discourse on family planning and their application in India. As I analyze in that chapter, communication scientists' framing of men as social and economic decision-makers would eventually shape how Indian policymakers targeted men as indispensable audiences for government family planning publicity. These definitions of decision-making, however, effectively effaced evidence of women's agency in domestic and economic life in the global South.

Notestein's closing remarks to the Research in Family Planning conference revealed just how persuasive Bogue and Stycos had been about the paucity of research on reproductive attitudes and behaviors and how to shape them. Clearly moved by their arguments, Notestein, who had by now succeeded Osborn as president of the Council, chided his audience at the conference for "[preferring] to await miracles in the form of new physiologic contraceptives." Railing against a near-sighted focus on new biomedical technologies, he stated:

> "Until the last few years there has been almost so social science research on the ways in which family planning could be efficiently promoted. Rather we have been preoccupied with discussions of the comparative effectiveness of one method versus another. In

> relatively simple experiments we have offered the villagers of Asia one method after another until discouraged by repeated failure to achieved results with available methods, we await some new device or discovery. Some eminent advocates of birth control are now proposing that serious efforts be deferred until a perfect and economically feasible method is developed… Facing failure after failure to stimulate the use of contraceptive methods that have been widely accepted in Western societies, we must draw the obvious conclusion that the basic problem is not one of method. Neither sterilization nor any method of contraception will be widely practiced without motivation" (1962:606-607).

Other conference attendees signaled their agreement. The Scripps Foundation demographer Pascal Whelpton (Kiser 1962:636) encouraged the conference organizers to invite more psychologists to future conferences, asking openly how they could "stimulate interest in the demographic aspects of psychology and social psychology." Even though much of the conference had dealt with communication and motivation in family planning, he noted that there had, in fact, been little discussion of research that could be carried out in that area. Similarly, University of Michigan sociologist Ronald Freedman lamented that social scientists had "widely repeated speculations" about sexual behavior and the motivation for family planning but not the "systematic data with which to test them" (Freedman 1962:596-97). This was an opportunity ripe for the redesign of demographic research and training itself. "The exciting challenge of this field," Freedman (1962:604) went on to tell his audience, "needs to be communicated to younger social scientists choosing a problem area for work. We are a hardy band but too small in number for the work to be done." Furthermore, he had been "especially impressed with the unique combination of opportunities in studying this problem in underdeveloped areas with official family programs," and recommended India as a potentially fruitful place to carry out this

research (1962:604).

The early 1960s had thus witnessed a new "credibility struggle" (Epstein 1996) over how to successfully intervene in population growth and which experts and disciplinary actors could be counted upon to unlock this success. Communication scientists, both within and outside of demography, embarked on a mission to spotlight what they believed was the indispensable role of behavioral scientific knowledge in informing fertility control programs, as well as to reinforce their legitimacy as credible participants in the population control movement. In doing so, social scientific population researchers challenged medical and biomedical experts' jurisdiction over technological solutions to fertility regulation—something that that they had, ironically, championed only a decade earlier. At the same time, they did so not by asserting and maintaining control over their own jurisdiction over the problem at hand. On the contrary, by functioning as an obligatory point of passage for those that wanted to contribute to population research, they "extended" the network of population control expertise, encouraging biomedical researchers to adopt a behavioralist stance towards contraceptive design and adoption and eventually succeeding in coaxing population policymakers to do the same.

3.5. A Battle for "Hearts and Minds": Family Planning and The Behavioral Science of Democratic Capitalism

From Stycos' critique of the "Planned Parenthood" approach to Notestein's stinging repudiation of biomedicine's descent into the intricacies of physiological contraception, claims about the untapped merit of mass communications in defusing the "population bomb" gained a crucial following in the early 1960s. Yet, while such bellicose metaphors were commonplace among population control advocates, the links between communication scientists' claims and

geopolitical concerns went beyond the merely semantic. As much as American communication scientists saw the motivation to practice contraception as a necessary precursor to contraceptive use and subsequent reductions in birth rates, they also believed that creating this motivation in the postcolonial world had important geopolitical implications. Indeed, researchers proffered scientific explanations for the apparent relationship between family planning and democratic modernization, thereby signaling the relevance of their expertise to securing U.S. foreign interests in an escalating Cold War.

As I detail in this section, in justifying their scholarly arguments on the basis of broader geopolitical concerns, communication scientists fundamentally linked the politics of containment in the postcolonial world with the regulation of reproductive behaviors and attitudes. In their view, the act of contraception reflected a psychological orientation to life that characterized individuals living in modern societies—where "modern" denoted the existence of democracy as a political system and capitalism as an economic system. According to communication scientists, therefore, to value planned childbearing and practice contraception was to bear the behavioral hallmarks of a modern citizen. In turn, to promote the practice of birth control in non-Western countries was to create the behavioral conditions for capitalist democracies abroad, and guarantee, as Notestein (1944:442) had once termed, the "peaceful security of the American people." Under this view, population control and family planning were less a matter of regulating bodies but, more appropriately, of winning "hearts and minds"—a definition of the problem that mapped onto American intellectuals' broader Cold War aspirations for the so-called Third World (Engerman et al. 2003; Gilman 2004; Latham 2003; Maharaj 2013; Siddiqi 2015). Designed appropriately, communication scientists argued, birth control publicity could not only help

increase contraceptive use but also powerfully aid American projects of democratic modernization by changing agrarian communities' attitudes towards life itself.

Communication scientists honed in on two broad assertions from regnant theories of modernization and mass communication to make this claim.[58] The first was that "traditional society" was made up of individuals with a psychological orientation that they termed "fatalism." In scientists' view, "traditional" almost always denoted "agrarian," and fatalism referred to a prevailing set of values, attitudes, and beliefs in agrarian societies that saw life conditions as matters of fate or acts of "god" (Hill, Stycos, and Back 1959:72-75, 234-35). Individuals in traditional societies, according to communication scientists, more often than not believed that their life conditions were not subject to intentional change. Likening fatalism to "resignation and hopelessness," they argued that in "the cultures of underdeveloped societies… the population is reputedly unaccustomed to the idea of active manipulation of the world in order to secure its ends" (1959:144-45). Second, fatalism appeared to lay the groundwork for "inaction" and an indifference to future-oriented planning. Since fatalist individuals believed that life was largely a matter of fate, they rarely took proactive steps to achieve more than they had already and plan courses of action for doing so. In other words, because they did not engage in what scholars termed the "active pursuit of ends," they could not be expected to value the act of planning (Hill, Stycos, and Back 1959:144).

On the other hand, scientists argued that individuals in "modern societies" typically engaged in purposive actions to "manipulate" their living conditions in order to achieve planned goals for the improvement of their lives (Hill, Back, and Stycos 1955; Hill, Stycos, and Back 1959).

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[58] In particular, these included the theories of communications scholar Daniel Lerner, social psychologist David McClelland, and sociologist Alex Inkeles.

Together, these two facets of thought represented what scientists termed an "orientation to change" and a favorable attitude towards achievement, the combination of which resulted in a value system that they termed "striving-planning" (Hill, Stycos, and Back 1959:234). To be a modern citizen, therefore, meant believing in the capacity for self-directed action to change aspects of one's life and valuing the task of "planning" such action so that it could have its intended outcome. Communication scientists thus cast democratic modernity itself in behavioralist terms, locating it primarily in the attitudes, beliefs, and values that individuals held in a society.

When it came to the realm of reproduction and the family, communication scientists argued that it was reproductive "fatalism" that undergirded an indifference to contraception in agrarian societies. Reproductive fatalism inhered in beliefs that childbearing and pregnancy were predestined and could, therefore, not be willfully or meaningfully manipulated. Consequently, individuals who adhered to reproductive fatalism did not plan courses of action, such as regular contraceptive use, to alter one's capacity to help conceive or bear a child. In turn, such individuals were less likely to believe and act upon the belief that planning for conception and childbearing could have beneficial effects by enabling them to achieve better economic outcomes. When put in these terms, the very act of contraception became emblematic of modern life. Practicing contraception was to believe not only in the manipulability of life but also in the value of altering one's life conditions in order to achieve greater socioeconomic success. Traditional and modern individuals could thus be distinguished, to a great extent, by their attitudes and outlooks on reproduction and the family.

Mass communication occupied a central place in American communication scientists' explanations for how a society moved forward on the spectrum of modernity, where modernity

was almost always defined as encompassing capitalist economic systems and democratic political systems (Shah 2003, 2011). The "passing of traditional society," as communications scholar Daniel Lerner put it in his book of the same name, was crucially linked to the introduction of mass communications infrastructure into those societies (Lerner 1958). In Lerner's view, by showcasing alternative ways of doing, thinking, and acting, mass communication had the capacity to eliminate fatalist modes of thought and the parochialism that characterized them. Furthermore, as Lerner and his contemporaries opined, when members of a society moved from fatalist to change-oriented thinking, they would become more open to valuing the tenets of capitalism and democratic politics, such as private profit, personal aspiration, and civic action (Lerner 1958). Stycos, who as a graduate student at Columbia University had analyzed data from Lerner's studies on mass communication and public opinion in Turkey and Greece, was especially convinced of this relationship (Stycos 1952).[59]

Yet when it came to designing exploratory research into the psychological antecedents of fertility beliefs and behaviors, communications researchers took issue with prevailing assumptions in prior medical and demographic research about the ideal "unit of study"—the kinds of individual or organizational formations about which theoretical conclusions could be drawn and to which government programs could cater (Hill, Stycos, and Back 1959:28). In Stycos's and his collaborators' view, medically oriented research had "centered on the mother as object of study, a focus which fits well with a medical conception of the problem as a special instance of maternal health" (Hill, Stycos, and Back 1959:28). In addition, they faulted prior demographic research, including Kiser and Whelpton's Indianapolis Fertility Study, for viewing

[59] See Shah (2011:98-99) for Stycos's involvement with Lerner's Voice of America studies at the BASR.

wives as merely "reporting agents for their families" (1959:28). Instead, the three researchers argued that the unit of analysis and governmental action programs needed to be meaningful from "a social as well as a biological point of view"—a unit in which "not only fertility but planning and decision-making can be meaningfully treated"—which led them to set aside individuals as the primary units of analysis and focus on decision-making groups (1959:28-29).

As the decision-making processes in which they were interested involved sex and reproduction, Stycos, Hill, and Back believed that the "nuclear family of procreation" was the ideal unit of analysis for such research. Stating that "both the husband [and father] and the wife [and mother] are the major actors in family planning and action" (1959:29), they cast the nuclear family as the ultimate "planning and decision-making unit" in the domain of fertility. Eventually, they settled on the tradition of "small groups" research in sociology, social psychology, and the communication sciences to study the interactional format in which seemingly individual fertility-related decisions were made in the nuclear family setting, focusing on the processes of "communication, consultation, conflict, compromise, and consensus" (1959:30). The mandate, therefore, was to study how families made fertility-related decisions in concert with each other—a mandate that Stycos, Hill, and Back believed future demographic research needed to adopt in order to inform "practical programs of action."

The interactional component of fertility decision-making was not the only concern that brought early family planning communications researchers to prioritize the nuclear family in their research designs. In addition, they asserted that it was primarily within the nuclear family setting that the virtues of family planning could be taught and its benefits realized. Here, researchers honed in on how this type of family had the greatest potential for "organizational effectiveness" in the domain of fertility (Hill, Stycos, and Back 1959:142). First, they argued that

nuclear families, headed by a companionate pair of husband and wife, tended to "close the social distance between sexes in marriage," which would subsequently lessen "taboos against communication on sexual matters" and increase "the likelihood of joint action in the area of fertility planning" (1959:143). In this view, since the ideal-typical nuclear family appeared to possess effective communication patterns on sex and reproduction, they also exhibited greater potential for interactional communication to result in effective fertility decision-making and, eventually, help secure the economic and material benefits that such decision-making portended. Stycos and his collaborators understood the nuclear family as the family type with the greatest "action potential" when it came to economic and reproductive matters, which they defined as the potential for the family as an organizational unit to have a "general inclination toward taking action" in these matters and be "conducive to the implementation of joint and/or individual goals" (1959:221). Nuclear families could thus be expected to produce more achievement-oriented and change-oriented individuals. Non-nuclear families, on the contrary, were expected to be more "sluggish" in their ability to have successful interactions on sex and reproduction, as they could not be expected to reduce the "distance" between husbands and wives; as a result, researchers argued, they were more likely to hold fatalist values in the domain of childbearing and be disinclined towards change.

Communications researchers thus saw the need to transform the "so-called population problem" into "several hundred thousand family problems involving family heads in decisions about future progeny" (Hill, Stycos, and Back 1959:40). They argued that demographers needed to view the problem in this way so that they could contribute to the kinds of research that governments could put into action: namely, research that attempted to parse out how people thought about "the pressures of numbers of children on the resources of individual families" and

how they could, in turn, be induced to value planned childbearing in order to manipulate—and maximize—those resources (1959:40). This kind of research would also allow family planning scholars to contribute to the general expertise on modernization by framing population control as an endeavor that could encourage agrarian families to adopt a "general orientation towards change" (1959:219). More importantly, however, given their assumptions about the nuclear family's superior organizational effectiveness, communications researchers reinforced the notion that any kind of mass communication program on family planning could not afford to merely advertise contraceptive technologies and their physical properties but also needed to promote the ideal-typical nuclear family and the activity of planning more generally. This would ensure that families were not only technologically supported to curtail fertility but also organizationally suited both to making particular kinds of fertility-related decisions and to understanding the relationship between fertility and economic achievement.

Before social scientists like Stycos, Hill, and Back attempted to determine *why* lower fertility rates were correlated with nuclear family structures, the idea that they were meaningfully related in the first place had already found a sympathetic audience among a handful leading demographers—prominently, Kingsley Davis. In an early article on the topic in the official journal of the American Eugenics Society, then under Frederick Osborn's leadership, Davis (1955b) offered a number of reasons for why extended family structures, unlike nuclear families, could be expected to result in higher fertility rates. Primary among them was the assumption that the "economic cost" of rearing children did not "directly impinge on the parents to the same extent that it does where the nuclear family is a more independent unit" (1955b:34). Davis believed that if parents could feel the impact and "inconvenience" of this cost (1955b:34-35), rather than having the economic and domestic assistance of extended family members as a

buffer, they would then recognize the futility of bearing greater numbers of children and plan conception accordingly. Furthermore, he hypothesized that these types of families often valued procreation—from either religious or moral points of view—for the express purpose of extending familial power given local customs around kinship, family size, and continuing patrilineal "family lines" (1955b:36). Finally, Davis suggested that the "segregation of male and female roles" in extended families had the consequence of stifling communication among husbands and wives on "the one thing that presumably represents their special bond," namely sex and reproduction (1955b:37). This claim would eventually form the basis for later arguments about the importance of "husband-wife communication" in contraceptive adoption. Indeed, Davis suggested that the gradual isolation of nuclear families that accompanied industrialization and urbanization in Western European countries during the demographic transition had likely led to individuals' increased propensity to believe in the benefits of limiting fertility, communicate with each other about those benefits, and, in turn, become oriented towards achievement-based values and away from fatalism. Davis's claims were later reiterated by William J. Goode, another leading family sociologist and eventual president of the American Sociological Association, who synthesized them in a oft-cited book that was effectively named *World Revolution and Family Patterns* (Burch and Gendell 1970; Goode 1963).

Stycos and his co-investigators helped Davis and Goode's hypotheses stand on firmer empirical footing. In line with their claims about mass communication, gendered family relations, and modernization, they argued that mass communication and information programs had the power to exert a significant influence on fatalist public opinion by increasing the "saliency" of contraception in particular and the activity of planning more generally among a given population (Hill, Back, and Stycos 1959:262, 298-305). In order to test this claim, Stycos

and his collaborators performed a series of experiments where the experimental treatments involved a series of interpersonal communications efforts and the distribution of printed pamphlets and documentary films on family planning among a sample of Puerto Rican husbands and wives. With evocative titles such as "Roots of Happiness," "The Troubles of a Family," and "When Things are Prepared, They End Well" (Hill, Stycos and Back 1959:262-265), these films and pamphlets served to "demonstrate the values of planning… and the necessity of having only as many [children] as one can feed, house, clothe and educate" (1959:262). Another set of illustrated materials titled "The Story of Two Families" juxtaposed animated drawings of two families, where one had more children but owned fewer material goods and lived in greater squalor than the other. Together, these mass media artifacts sought to instill in experimental audiences an aspiration for economic and materials gains, and convince them that smaller families in particular and the act of planning more broadly would enable them to realize those aspirations.

The content of Stycos' experimental interventions would eventually set the stage for future experiments and stated-led programs on family planning communications. Samuel Stouffer, having met with Stycos in 1960 and viewed these materials, spoke approvingly of them. When advising the Population Council about research that its new communications initiative could sponsor, he stated that it was important that the audio-visual materials used in that research include "visible rewards" for changed behavior so that "the use of contraceptives will be more appealing to people."[60] "One might show," he continued, "pictures of different families by size,

[60] Mauldin Diary Notes, March 25, 1960, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 796.

one with and one without an item," so that it was "possible for one to visualize that by his own efforts he could improve his lot… that one can affect his future by his own efforts."[61] If experimental research showed that such "conspicuous examples" of difference allowed participants to visualize the economic benefits of smaller families, then "the impact of a particular educational campaign is likely to be greater" if it made use of similar examples.[62]

These discussions reveal how the phrase "family planning" was not simply a euphemism for contraception and population control, as historians of population control have suggested (Connelly 2008). On the contrary, it underscored communication scientists' fundamental claims about the relationship between the motivation to use contraception and what it meant to be a modern liberal subject. In behavioralist terms, it was not the fact of fewer children that made one modern, but the capacity to envision the costs and benefits of childbearing and design a course of action to avoid those costs and maximize those benefits. When viewed in this way, crafting postcolonial citizens who valued planning was not only a means towards reducing birth rates; it was also a geopolitical end in itself.

3.6. Conclusion

This chapter showed that by the early 1960s social and biomedical scientists had developed a collective interest in investigating "birth control for a nation." This endeavor cast governments in low-income countries as important, if not the primary, "end users" of contraceptive technology. As such, scientists expanded the criteria for contraceptive

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[61] Ibid.

[62] Ibid.

"acceptability" (Oudshoorn 2004) beyond the needs and characteristics of prospective individual users to include those of entire states seeking to reduce population growth rates on an aggregate scale. These new criteria included the cost of promoting particular contraceptive technologies on a large scale, governments' capacity to provide the necessary training and infrastructure for a program centered on those technologies, and their capacity to withstand tradeoffs between a technology's "clinical efficacy"—that is, its success at preventing pregnancy in the individual body from a biological point of view—and its practical "effectiveness"—that is, its success at reducing birth rates when applied to entire populations in the context of a national policy program. This alternative set of criteria for evaluating contraceptive success diverged from those of midcentury reproductive scientists, who were almost exclusively interested in a prospective technology's clinical efficacy in the individual reproductive body (Clarke 1998; Oudshoorn 1999, 2004). It was also distinct from feminist and birth control activists' arguments that contraceptive design should be based on its ability to enhance women's reproductive autonomy, bodily safety, and health (Chesler 1992; Gordon 2007; McCann 1994; Oudshoorn 2007).

Social scientists, however, took medical practitioners and biomedical scientists to task for neglecting key aspects of states as markets for birth control. According to them, by focusing their research on technically sophisticated methods of intrauterine and hormonal contraceptive technologies, medical and biomedical researchers had overestimated the capacity of these methods to fulfill the new criteria in contexts like India, which were characterized by significantly fewer resources and inadequate clinical infrastructures and labor. Furthermore, social scientists argued that biomedical researchers had assumed too much about basic levels of

"motivation" to control fertility among populations in these contexts, even for permanent "one-shot" methods such as sterilization and long-acting methods such as intrauterine contraception.

In addition to these criticisms, social scientists believed that a long-term population control program demanded far more than medical and biomedical methods for the prevention of pregnancy. According to them, it required creating the kinds of individuals and families that believed in the manipulability of their life conditions, saw the virtues of planning in general and planned conception in particular, and understood the links between planned conception and material achievement and security. Such individuals and families could be expected to communicate amongst themselves about contraception and other matters related to family planning, as well as view these matters as *economically* consequential.

Taken together, the above criticisms suggested to social scientists that to fulfill new criteria for contraceptive success in the context of state-led population control programs, governments needed to begin with transforming public opinion. Changing social norms and widely held beliefs about family structure and size would instill the basic motivation to adopt contraceptive technologies among the "masses" while creating the kinds of achievement-oriented and change-oriented families that could be expected to believe in the economic benefits of planned conception and act on that belief. These criticisms further suggested that when it came to resource-strapped government programs in contexts of high poverty, policymakers and scientists needed to look beyond technologically complex, clinic-dependent, and expensive contraceptive techniques.

At the same time, American social scientists argued that at stake in reducing national birth rates were not only the prospects of national economic growth, but also those of capitalist

democracy itself in a new geopolitical era. According to communications experts, nuclear families that believed in the act of planning and maximizing economic achievement were the social and behavioral building blocks of this kind of political economic system. Small nuclear families could be expected to prioritize the private accumulation of wealth and view family size and structure as determinants of this wealth. In addition, the companionate husband and wife at the head of this type of family could be expected to communicate amongst themselves about reproductive and sexual matters, thereby increasing the likelihood that they would act upon their achievement-oriented beliefs by choosing to adopt contraceptive methods. Moreover, these families could be expected to not dilute familial wealth by supporting extended kinship relations and on purchases for basic consumption, but rather to see the value of containing it within the immediate family structure. In the new field of family planning communications, American geopolitical aims were articulated in biopolitical terms. When viewed in these terms, the nuclear family appeared in social scientific arguments as a crucial part of the transition to modern society, the latter characterized by broad commitments to capitalist and democratic principles.

CHAPTER 4

Diffusing Information, Defusing the Population Bomb: Family Planning Extension in Cold War India at the Nexus of Science and the State

4.1. Introduction

As seen in Chapter 3, by the turn of the 1960s American communication scientists working within and outside demography had cast the debate over fertility regulation in behavioralist terms. Population researchers in the U.S. were thus furnished with a new framework within which to assess the effectiveness of state-led fertility control programs. By suffusing population control discourse with discussions about motivation, communication, and their relationship to attitudinal change, communication scientists had prompted population research organizations, private donors, and other academic advocates of population control to rethink their scholarly and funding priorities. Although biomedical efforts in contraceptive development did not abate, social scientists had introduced mass communication and motivation as important arbiters of contraceptive adoption among the "contraceptive incompetent" while framing the use of birth control publicity as a worthwhile means towards broader geopolitical goals.[63]

Consequently, investigating motivation and communication seemed to be a promising way to boost the lagging profile of the social sciences in providing "solutions" to, and not just diagnoses of, the population problem with potentially far-reaching consequences. It was clear that in order to make good on these claims large-scale survey research on "knowledge, attitudes, and practices" related to reproduction needed to commence in earnest, alongside experimental

[63] See Ziegler (2008) on how Bogue defined "contraceptive incompetence."

studies of how mass communicated information influenced these phenomena. As a result, prediction and historical explanation ceased to be the sole rationales for demographic research—the ability to plot the fertility decision-making process and ascertain points of intervention in it had become a new and potent impetus for demographic work.

In the following chapter, I show how India gradually became a key site for the implementation of family planning communications research so that demographers, communications researchers, and their research patrons could make good on these interventionist goals. I analyze this history by paying attention to how actors in the various social worlds that made up the arena of population control and international family planning traversed the boundaries among those worlds, brought perspectives from their worlds to others, and "enrolled" each other into sharing their own interests. First, I document the emergence of family planning communications research as a stand-alone subfield of social psychological research into fertility decision-making and its tenuous acceptance of what came to be known as "action research." Part of this story hinges on how family planning communications scholars used the U.S. as a stopgap measure for research purposes when Indian authorities were unwilling to host them to conduct the same research in India. I then analyze how the Ford Foundation's field office in New Delhi, headed by Douglas Ensminger, charted a new course for family planning action research in the country by helping institutionalize the application of mass communications expertise in the Indian state's development agenda, largely through funding and designing agricultural extension programs in the country. Finally, I demonstrate how the Indian central and state governments adopted "family planning extension" as a new approach to the country's population limitation program, thereby applying insights from communications expertise to Indian family planning policy.

4.2. A Fledgling Field: "Action Research" and the Foundation-Led Establishment of Family Planning Communications

Even as the impact of mass communication on fertility decision-making became a core concern among American demographers and population control advocates in the late 1950s and early 1960s, the question remained as to how and where to conduct systematic research on the issue. Stycos's exploratory studies in Puerto Rico notwithstanding, demographers at the Population Council and elsewhere fell back on previous beliefs that, from a geopolitical point of view, India was where cutting-edge social science research on population control needed to proceed (Notestein 1962; Freedman 1962). Over the next decade, a new cadre of family planning communication scientists and the American population research organizations that funded them would seek to establish a fledgling research field by appealing to Indian policymakers' concerns about the effectiveness of the country's population program. Yet while population researchers sought to retain ownership over potentially publishable data and avoid overt charges of "social engineering," Indian policymakers were intent on designing research that would have effects on the ground and thus initially sought to keep American family planning communication researchers at bay.

These contrasting views fomented disputes over what was termed "action research"—that is, research conducted in the context of government-initiated family planning programs in order to produce "actionable" results. The debate over action research would set the stage for the consolidation of family planning communications as a field of study and how insights from the field were grafted iteratively onto the Indian population control program.

As this section shows, American foundations in India would help settle the debate by blurring the boundaries between "science" and "governance," convincing family planning communication scientists that conducting research through governmental channels was not only feasible but preferable, and persuading policymakers to welcome American consultation on these projects. At the heart of these shifts were officials from the Ford Foundation's India field office, in particular, who had been working in India throughout the 1950s to spur agricultural and community development. Trained predominantly in agricultural extension and the communications theories that undergirded it, they were resolute in their conviction that Indian development policy could benefit from the best of American social science and, in particular, communications research. By likening the promotion of family planning to the promotion of agricultural modernization, they would thus ensuring that family planning communications could find firm academic footing with the cooperation of a willing foreign government while also seeing to it the Indian family planning program transformed in response.

4.2.1. Charting a Course for Family Planning Communications: The Population Council, the Department of Family Planning, and the Debate over "Action Research"

While India had already been fashioned as a fitting context for the application of research on population control during the 1950s, the events of 1960 would further signal to American researchers and donors that India was an appropriate "home" for family planning communications research. The Indian Planning Commission had recently announced that the approach to family planning and population management in its Third Five-Year Plan would be different from the two that preceded it. Word that the Plan would involve some kind of target goal for reductions in birth rates had already reached American foundation offices. With a

reconfigured Third Plan on the horizon, it seemed to those at the Population Council and the Ford Foundation—the latter of which had become responsible for over half of the Population Council's growing budget by then—that Indian policymakers might be receptive to amplifying domestic research on family planning if promised adequate funding and qualified American consultants. Having tried but failed in the previous decade to institute chairs in demography at major Indian universities in Bombay and New Delhi, Population Council staff members were hopeful that the 1961 census results, soon to be announced, would jolt the Indian government to "commit [itself] to agree to support demographic studies" and spur university chancellors to make demography a core part of social science curricula and research activities.[64] Many felt that the time was ripe to write to "the appropriate authorities indicating our interest in discussing population problems, and in providing technical help when needed… to speed the day when they will undertake serious studies."[65] Furthermore, by 1960 the Population Council and the Ford Foundation had become the two largest and wealthiest private organizations working in the domain of population issues in India. The Rockefeller Foundation, the other well-endowed American organization working on family planning research in the country, had run afoul of Raina and the Central Family Planning Board due to the controversies and delays surrounding its Harvard-led Khanna Study.[66]

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[64] Letter from Mauldin to Balfour, February 27, 1958, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 413.

[65] Ibid.

[66] Office memorandum from Kirk to Balfour, Mauldin, and Osborn, August 7, 1958, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 794. For an extended discussion of the Khanna Study and the controversies around its design and execution, see Connelly (2008) and Williams (2014).

As Council president in this rapidly shifting environment, Notestein would overhaul the Demographic Division's priorities and see to it that the Council built on the growing momentum among Indian administrators to prioritize fertility limitation. Although the Council's Demographic Fellowship Program had been instrumental in establishing American expertise on fertility regulation and population control within the Indian university context, Council-trained graduate students lacked the seniority it often took to translate those visions into practice within Indian universities and governmental bureaucracies. Coupled with the lack of demography training in universities, Council researchers expected the Fellowship Program's impact to plateau.[67] Moreover, the Fellowship Program had been inadequate at getting American researchers into India to conduct field research on family planning and publish analyses of their findings, both of which had remained a core complaint for the Council's social scientists throughout the 1950s. Given this, Council and Ford Foundation representatives began to feel that they were now in a position to leverage their vast resources to amass governmental and scholarly support for a concerted program of family planning communications research in the country.

Raina's newfound interest in communication and motivation was a promising prospect for the Council as a pathway to filling this void. His first project investigating these issues, the Health Education Project, had yet to get off the ground due to limitations in survey design, staff shortages, and a corresponding lack of audiovisual technologies for the study's motivational treatment.[68] Notestein, buoyed by Stouffer's visits to the Population Council, had successfully

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[67] Letter from Mauldin to Balfour, February 27, 1958, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 413.
[68] Office memorandum from Mauldin to Kirk, April 20, 1959, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 795.

managed to convince its Board of Trustees to approve $60,000 for the project in 1959, of which a little over half had been set aside for technical aid in the form of audiovisual equipment, such as American-made radios, slide projectors, and film projectors, as well as vehicles to transport this equipment to experimental areas.[69]

What the rest of the grant was going to support was debated over the next few months, with Council representatives angling to spend the money on salaries for on-site American consultants to the project or the experimental testing of "traditional methods of communication," such as storytelling and puppetry, and Raina pushing for the furnishing of more audiovisual equipment.[70] Taking the issue into their own hands, the experts at the Population Council began independently seeking out information on possible candidates for project consultants, while collating information on "traditional" sources of information and entertainment in the country and reaching out to Stycos about whether he would be interested in designing a pilot survey for the project.[71] When the Council settled on two University of California public health researchers, Beryl Roberts and William Griffiths, as potential consultants, it paid for them to visit Raina in Delhi with Mauldin, in the hopes that their prestige and presence would convince Raina to host them for a full year.

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[69] Letter from Mauldin to Raina, June 5, 1959, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 795.

[70] Letter from Notestein to Osborn, July 10, 1959, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 795.

[71] Letter from Mauldin to Stycos, April 24, 1959, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 795; Letter from Mauldin to Chandrasekharan, May 5, 1959, RAC, FA432, Record Group 2, Accession 2, Series 2, Box 83, Folder 786; Letter from Tietze to Balfour, January 25, 1962, RAC, FA432, Record Group 2, Accession 2, Series 2, Box 84, Folder 804.

Raina, on the other hand, was loathe to cede executive control over the project to full-time consultants, likely responding to the growing suspicions of Nehru and the Planning Commission towards foreign aid donors' attempts to direct the country's development efforts (Sackley 2012).[72] Forthright about his frustrations that programmatic efforts were not having any measurable impact on fertility rates on the ground, as well as critical of what he felt was a slow-moving Khanna Study, Raina proposed "trying out programs in the field, getting hints from the exchanging of program [sic] and going ahead."[73] Furthermore, stating that he had "a one-track mind"—which wanted to reduce birth rates by any and all known means—he called for a "quick-action program" that negated long-range, basic research in favor of applied work. Intriguingly, Raina was on the same page as the deceased Stouffer, who had flatly averred that family planning was not a domain in which to waste time on "tight experimental design" or survey protocol but, rather, one that favored " "throwing the book" at a given population and observing the results."[74] All the same, Mauldin and the two would-be consultants tried hard to persuade Raina of the import of conducting "long-range research" with a fully fleshed out survey and experimental design and full-time American field researchers. It became clear to the three, however, that they differed from Raina in their definition of research. While Raina believed that an action program could yield opportunities for quick analyses that were unencumbered by the dictates of "tight" experimental design, Mauldin, Griffiths, and Roberts stuck to their view that

[72] Mauldin Diary Notes, May 3, 1960, RAC, FA432, Record Group 2, Accession 2, Series 2, Box 84, Folder 796.

[73] Ibid.

[74] Mauldin Diary Notes, March 25, 1960, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 796.

true research required careful planning and execution in a field that they believed was still embryonic.

Notestein, for his own part, had already attempted to intercede from afar, writing to Raina that although they had "similar views concerning the need for studies of many facets of the problem of communication and motivation," since not much was known about how these two concepts operated in the realm of family planning it would be folly to proceed with action programs without understanding the nuances of communicating reproduction-related information.[75] Calling the issue a "difficult area of investigation," he asserted that it would be similarly "difficult for us to confine our role in the field to the furnishing of audio-visual units," and that Council staff and grants were committed, first and foremost, to "scientific development through training and research."[76] At the same time, Notestein tried to assuage Raina's suspicions about the motives of American foundation donors. Clarifying that while the "board of trustees believe that a private American group can be helpful in training, research, and development," he was keen to "distinguish sharply between helping to learn how to spread the practice of family planning, and the task of applying that knowledge," the latter of which, he assured, they would leave up to Raina and the Ministry of Health.[77]

The back-and-forth between the Population Council and the Central Family Planning Board about what constituted research and what would be an efficient approach to designing the

[75] Letter from Notestein to Raina, February 5, 1960, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 796.

[76] Ibid.

[77] Ibid.

Health Education Project was significant for three reasons. First, the Demographic Division's attempts to chart a middle path between "tight" research design and the "action programs" that Raina and Stouffer favored reflected the lengths to which population research organizations went to shape the earliest studies of family planning communications in India. Spurred by the felt need to establish new avenues of social science research on population control and to not leave this task up to biomedical experts, Notestein and his colleagues hoped that any Council-funded study in this new area would retain control over survey or experimental data on reproductive attitudes and behavior produced in the Indian context, analyses of which could be published and used as leverage for more social science funding in the area.

Relatedly, by pushing to be involved in the design of the study's experimental treatments, the Population Council not only wished to "speed up the procedure," but also to shape the audiovisual information used in those treatments in the hopes that Council-produced materials would serve as a springboard for future government-authored publicity.[78] Until then, the few university studies in India that had attempted to assess the impact of educational materials on contraceptive practice had restricted these materials to explaining reproductive physiology (Fig. 6). Instead, the Council hoped that Indian researchers and policymakers would "seek various methods of educating villagers as to the need for family limitation."[79] As Mauldin had once explained to the AIIHPH director and Singur Study overseer, W.K. Jungalwalla, "this education

[78] Office memorandum from Mauldin to Kirk, April 20, 1959, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 795; Mauldin Diary Notes, October 10, 1958, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 786; Letter from Mauldin to Ronald Freedman, April 27, 1959, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 795.
[79] Letter from Mauldin to Jungalwalla, November 22, 1957, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 83, Folder 786.

is different from that of teaching a bit about the physiology of human reproduction, rhythm theory, coitus interruptus, and the use of foam tablets."[80] On the other hand, it involved fieldworkers talking "to individuals every two or three months about their problems" and linking those problems to family size.[81]

Additionally, the Health Education Project was an early example of the Council's efforts to provide technological aid to national governments in the service of population reduction.

Figure 6. A family planning educator uses a flipbook to teach women about reproductive physiology, after the introduction of the Lippes Loop in India in the early 1960s. Source: *The Hindu,* April 17, 2016.

Tellingly, this early aid took the form of information and communications technologies—transistor radios, film projectors, and slide projectors—thereby revealing the significance that the Council had recently accorded to mass communication as a technological solution to overpopulation. On the contrary, aid in the form of new contraceptives was not yet in sight in

[80] Ibid. "Coitus interruptus" refers to the practice of withdrawal during sexual intercourse.

[81] Ibid.

1960. Indeed, the Council's IUD development program was still two years away from testing, promoting, and distributing its prototypes in India and Taiwan.

4.2.2. The United States as a "Laboratory" for Global Population Control: Plugging the Research Void

Sensing Indian policymakers' initial reluctance to entertain American researchers oriented towards basic research, the Population Council and the Ford Foundation attempted to fill the resulting scholarly void by promoting family planning communications research in the U.S. itself. By the end of 1960, high-level conference discussions of motivation in family planning had done much to foment behavioralist agendas in the field—agendas that were concerned as much with understanding and intervening in the social psychological contours of "reproductive decision-making" as with historical and predictive explanations of macro-level population dynamics. Rising scholars such as Bogue, Stycos, Kiser, and Whelpton—all of whom were part of a new generation of demographers at Princeton, the University of Chicago, and the Scripps Foundation—were now fully invested in behavioralist theoretical and methodological approaches to understanding how people made decisions about sex and reproduction and how those decisions were shaped by underlying beliefs, norms, and attitudes. Furthermore, they openly hoped that these approaches would illuminate appropriate policy-relevant interventions into those decisions. Thus, American demography was beginning to experience its own "behavioral revolution," centered on the concepts of motivation and mass communication and how these could help policymakers design "direct" efforts into fertility regulation. As Greenhalgh (1996) has analyzed, many in this new generation believed that it would behoove American demography to view itself as fundamentally concerned, if not coterminous, with

family planning—an argument that situated the field firmly within the realm of "policy science" (Hodgson 1983).

Bogue and the CFSC commandeered many of these early resources. Having succeeded University of Chicago sociologist Ernest Burgess as director of the CFSC, Bogue had been looking to expand the center's resources and the scope of its demographic program. Convinced that research in demography needed to proceed in a behavioralist direction, he went to work to garner Population Council funds for survey and experimental research on what he explicitly termed "mass communication and motivation in family planning" (Bogue 1967). From 1961 to 1963, he would receive close to $103,000 from the Council for a six-year-long study of "high fertility populations" in Chicago.[82] Between 1964 and 1966, he would win another $160,000 for similar experimental studies in Kentucky, Alabama, Tennessee, and Mississippi.[83] As a result, the CFSC would become a key center for the production and publication of family planning communications research as well as graduate training in the subfield.

For the Population Council and the Ford Foundation, promoting family planning communications research in the U.S. would not only help plug the gap in knowledge about the

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[82] "Demographic Grant: Community and Family Study Center, University of Chicago, Illinois," October 9, 1963, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 55, Folder 845; Research Proposal, "Further Experiments in Family Planning Communication and Motivation Among High Fertility Populations in Chicago: An Application for a Two-Year Research Grant to The Population Council, Inc.," 1963, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 55, Folder 845.

[83] Letter from Notestein to Dana Creel, October 21, 1963, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 56, Folder 903; "Demographic Grant to the University of Chicago," January 14, 1964, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 56, Folder 903; "Demographic Grant: University of Chicago, Illinois," December 15, 1965, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 73, Folder 1384.

motivational aspects of contraceptive decision-making, but also provide ready frameworks for application abroad if and when foreign governments became more hospitable to their requests. Bogue and his graduate students at the University of Chicago capitalized on this goal by justifying their research projects in similar terms. By pursuing research on "the slums of Chicago, the poverty-stricken rural areas of Eastern Kentucky, and even the poorer rural "Black Belt" of Alabama," they argued that the U.S. could serve as a ""laboratory" for experiments" on how to apply theories of mass communication to the study of fertility decision-making and attitudinal change.[84] The goal was to "try out some of the communication and motivation techniques… on some of the poorest, least educated, and more rural communities we can find in the U.S." in order to "reveal a new and much more effective way of reaching low-educated and rural people" in developing nations and contribute to the improvement of those nations' family planning programs.[85] Indeed, Bogue went so far as to call low-income communities in the U.S. "comparable" to the "hopelessly poor, peasant populations in rural Africa, rural Asia, and rural South America," both in terms of their lack of motivation to use birth control and the kinds of cultural and social proscriptions against its use.[86] By equating poor communities and

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[84] Research Proposal, "Experiments in Persuading "Hard Core" Resistors to Family Planning: An Application to Population Council to continue a program of Basic Theoretical Research with Implications to Fertility Control," 1965, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 73, Folder 1384.

[85] Letter from Donald Bogue to Guttmacher, August 7, 1963, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 55, Folder 845; Research Proposal, "Experiments in Persuading "Hard Core" Resistors to Family Planning: An Application to Population Council to continue a program of Basic Theoretical Research with Implications to Fertility Control," 1965, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 73, Folder 1384.

[86] Research Proposal, "Experiments in Persuading "Hard Core" Resistors to Family Planning: An Application to Population Council to continue a program of Basic Theoretical Research with

communities of color in the South Side of Chicago and the rural American South to those in the global South, Bogue had provided the Population Council with a rationale for launching family planning communications research in the U.S. while it waited for a more receptive audience in India. In the meantime, over the next several years he would garner further resources from the Population Council and the Ford Foundation to host a series of workshops on family planning with the explicit intention of training graduate students and researchers from low-income countries—particularly India—on the science and implementation of family planning communications, using these workshops as an opportunity to lay the groundwork for a favorable research climate in those countries while allowing foreign trainees to learn from some of the leading scholars of mass communication within and outside of demography. These included Elihu Katz, Bernard Berelson, and Dudley Kirk.[87]

Although the Population Council was unwilling to engage with Raina's goals for an action program in family planning motivation, it nevertheless allowed Bogue to pursue what he explicitly termed as a set of "action experiments" in housing developments on the Chicago South Side and some of the poorest rural counties in the American South.[88] The board of trustees was

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Implications to Fertility Control," 1965, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 73, Folder 1384.

[87] "Resolution of Grant," October 9, 1963, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 55, Folder 845; "Tentative Program for Phase A Workshop on Mass Communications and Motivation with Special Regard to Family Planning," 1963, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 55, Folder 845; Letter from Bogue to Kirk, February 23, 1966, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 73, Folder 1385.

[88] "Demographic Grant: Community and Family Study Center, University of Chicago, Illinois," October 9, 1963, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 55, Folder 845.

convinced that the center's researchers, unlike their Indian counterparts, would be able to bring sophisticated methodological expertise and experimental techniques to their work even if their ultimate goal was explicitly that of "reducing birth rates."[89] By then Bogue had already "proposed to study exhaustively the literature on persuasion" in political science, public opinion research, and media research in the communication sciences.[90] The CFSC studies drew on this extensive literature to design their experimental treatments, relying on the diffusion of innovations theory and the two-step model for the purpose. According to these theories, both the distribution of mass media—in particular, newspaper advertisements and mass-mailed leaflets on family planning and birth control—and interpersonal communication among members of various participating areas could be counted upon to have appreciable effects on communities' understandings of the relationship between childbearing and socioeconomic outcomes. The CFSC partnered with local Planned Parenthood chapters to make various techniques of contraception, primarily the oral pill and condoms, available to patients who expressed a willingness to adopt them as a result of the experimental treatment. In Chicago, the center would also place information about the research program and affiliated clinics in prominent black newspapers, such as *The Chicago Defender,* in the hopes that those who were not located in experimental areas would also come into routine contact with information about the program

[89] Research Proposal, "An Experimental Effort to Reduce Birth Rates in the Rural South by Community Mobilization," December 13, 1963, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 56, Folder 903.

[90] Research Proposal, "Experiments in Persuading "Hard Core" Resistors to Family Planning: An Application to Population Council to continue a program of Basic Theoretical Research with Implications to Fertility Control," 1965, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 73, Folder 1384.

(Fig. 7 and 8). Bogue would even go so far as to speak at local black churches to spread word about the "Chicago Population Explosion" and what they could "do about it."[91]

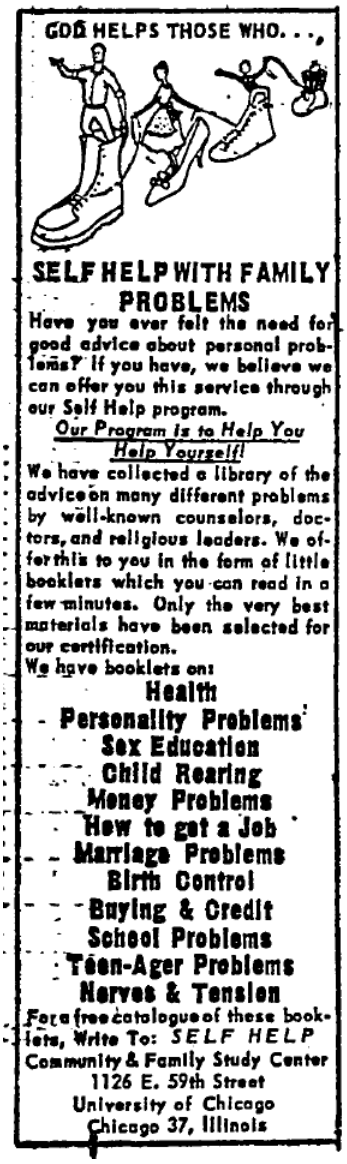
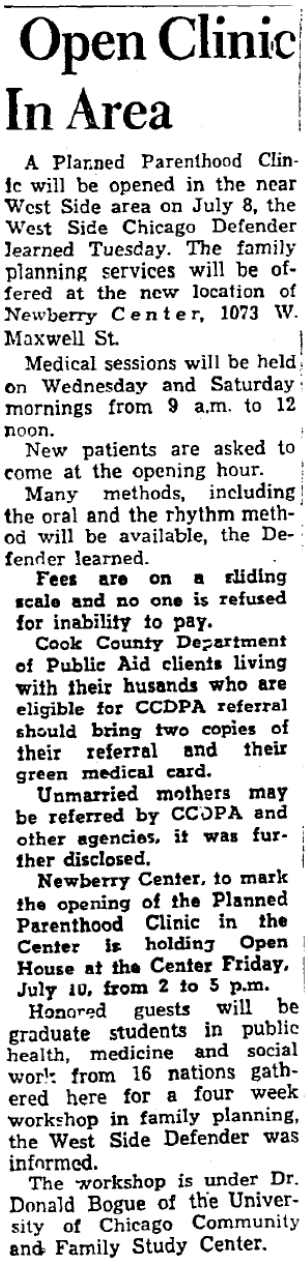


Figure 7. An advertisement in *The Chicago Defender* enjoining readers to contact the Community and Family Study Center for informational booklets on various "family problems," including birth control, sex education, child rearing, and money. Source: *The Chicago Defender,* August 11, 1962.

[91] "Professor to Speak Sunday," *The Chicago Defender*, October 27, 1962.



Open Clinic In Area

A Planned Parenthood Clinic will be opened in the near West Side area on July 8, the West Side Chicago Defender learned Tuesday. The family planning services will be offered at the new location of Newberry Center, 1073 W. Maxwell St.

Medical sessions will be held on Wednesday and Saturday mornings from 9 a.m. to 12 noon.

New patients are asked to come at the opening hour.

Many methods, including the oral and the rhythm method will be available, the Defender learned.

Fees are on a sliding scale and no one is refused for inability to pay.

Cook County Department of Public Aid clients living with their husands who are eligible for CCDPA referral should bring two copies of their referral and their green medical card.

Unmarried mothers may be referred by CCDPA and other agencies, it was further disclosed.

Newberry Center, to mark the opening of the Planned Parenthood Clinic in the Center is holding Open House at the Center Friday, July 10, from 2 to 5 p.m.

Honored guests will be graduate students in public health, medicine and social work from 16 nations gathered here for a four week workshop in family planning, the West Side Defender was informed.

The workshop is under Dr. Donald Bogue of the University of Chicago Community and Family Study Center.

Figure 8. Information in *The Chicago Defender* on a new Planned Parenthood affiliated with the CFSC studies. Source: *The Chicago Defender,* July 4, 1964.

When it came to interpersonal communication, the center attempted to locate "opinion leaders" in its experimental areas—men and women who were influential in their communities and, thus, could be expected to have the trust and attention of members in those communities. Opinion leaders were then provided with favorable information on family planning and birth

control, as well as information on where contraceptives could be accessed in their communities, under the assumption that they would then bring that information to people in their social networks. To analyze whether these publicity programs had had an effect on community attitudes towards family planning and birth rates, Bogue and his students conducted some of the first systematic KAP surveys of community members in experimental areas, asking respondents whether and how they had gleaned information on birth control; if they had sought out contraception in response to that information; their beliefs about family planning, both before and after having come into contact with information on birth control; and whether they were currently practicing contraception. Eventually, Bogue would claim that the CFSC's experiments had, indeed, had their intended effects on fertility rates.[92]

4.2.3. From Agricultural Extension to Family Planning Extension: The Ford Foundation's Delhi Field Office and the Blurring of Boundaries Between "Science" and "Policy"

While the Population Council and the family planning researchers it funded were initially hesitant to engage in overt action research in India despite their stated goals to conduct policy-relevant studies of fertility, this reluctant interest would experience a fillip in 1962, when it became clear to Council researchers that American foundation officials in India had begun to fund family planning research and programs in the country. As a result, by 1962 the study of family planning communications would move beyond North America and the Caribbean and into

[92] Research Proposal, "Further Experiments in Family Planning Communication and Motivation Among High Fertility Populations in Chicago: An Application for a Two-Year Research Grant to The Population Council, Inc.," 1963, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 2, Box 55, Folder 845.

India. Longtime promoters of action-oriented research, foundation officials would convince family planning researchers and research organizations that their goals to craft policy-relevant research would be better achieved if these studies proceeded under the auspices of state-sponsored programs. In many ways, this argument drew on foundations' broader postwar prerogatives to shape development policymaking in India and other postcolonial regions, a task that foundations took very seriously (Krige and Rausch 2012; Sackley 2012; Sharpless 1997).

At the center of these deliberations was the Ford Foundation's New Delhi field office. The Delhi field office was the first of its kind when it opened in 1951 under the direction of rural sociologist Douglas Ensminger, serving as a model for regional offices that the Ford Foundation established in other countries across Asia, Africa, and South America. The Foundation, headquartered in New York, imagined its field offices as its "eyes and ears" in grant-receiving countries, relying on them to transmit important information about the political and economic climates in those countries, develop relationships with key postcolonial elites including government leaders, policymakers, and bureaucrats, assist the New York office in determining funding priorities, and supervise whether grant monies were spent in ways the Foundation saw fit (Sackley 2012:223). As such, foundation field offices were critical "translators" of American foundations' Cold War aims, helping to design development initiatives that appealed to both postcolonial elites and U.S. actors in a bid to further American goals for democratization and modernization abroad. Inoculated from the kinds of domestic political oversight and censure reserved for American presidential and legislative action in controversial areas such as population control, foundations used their field offices to cast themselves as "apolitical" even as they held American geopolitical views by aligning themselves with the putatively "objective" practice of social scientific research on development (Sackley 2012). In turn, by accepting field

office assistance, Indian elites and bureaucrats were able to secure their political position and fend off criticism that they were allowing foreign governments to dictate Indian policymaking. Thus, foundation field offices, such as the Delhi outpost, operated as key nodes through which U.S. geopolitical objectives were met outside of official intergovernmental channels.

From its inception in 1951, the Delhi field office was involved primarily in funding agricultural extension research and what was termed "community development" (Cullather 2010; Sackley 2012). Agricultural extension had been developed in the U.S. during the New Deal and World War II eras, when the United States Department of Agriculture (USDA) collaborated with rural sociologists and other social scientists at agricultural and land-grant universities to educate American farmers in the U.S. South and Midwest regions in techniques of "modern" and "scientific" farming while encouraging them to adopt new biotechnological innovations, such as hybrid crop seeds (Fitzgerald 1990, 1993). In the Cold War context of international development, however, the Ford Foundation and Rockefeller Foundation reframed agricultural extension as a tool for capitalist democratization at the interface between credentialed science and government action, viewing it as a means of creating achievement-oriented and aspirational rural communities in the postcolonial world (Cullather 2010; Ford Foundation 1964, 1965; Sackley 2012). Contrasting the "bottom-up" model of modernization in the American model of agricultural extension with the emphasis on large-scale industrialization and forced agricultural collectivization in Soviet expertise, American foundation officials argued that efforts to diffuse agricultural innovations—anchored in the use of mass communications technologies and interpersonal communication strategies—could inculcate democratic ideals and civic-mindedness in countries such as India. The backbone of Ford-assisted extension in India was the "demonstration program for food production," whereby the Indian Ministry of Food and

Agriculture used a combination of trained fieldworkers and mass media materials to persuade farmers in select villages across the country to adopt new techniques for farm and soil management and hybrid crop seeds. By the early 1960s, the Ford Foundation's contributions to promoting agricultural extension in the postcolonial world would surpass the Rockefeller Foundation's largesse, due in part to its exponentially increasing resources. The Ford Foundation's Delhi field office thus became a primary institutional conduit for the transfer of knowledge about agricultural extension among the Indian state, U.S. university institutions, and their Indian counterparts (Fig. 9). Its efforts dovetailed with the U.S. Department of State's

Figure 9. Indian students at Uttar Pradesh Agricultural University take soil samples as part of a Foundation-sponsored grant to the university for training and research in farm management. Source: Ford Foundation (1964).

mission to use Point Four Program funding to bring agricultural extension knowledge and its applications to India, further underscoring the parallels between the Foundation's geopolitical views and those of the U.S. state.[93]

Given the pride of place that the Ford Foundation accorded to agricultural modernization in its international programming, it chose former USDA extension specialist Douglas Ensminger to be the face of the foundation in India. A rural sociologist by training, Ensminger was intimately familiar with the communications theories that underpinned extension knowledge, including the diffusion of innovations model. In India, he became a central purveyor of the view that mass communications-assisted farmer education and rural development would lift Indian agrarian communities out of poverty and mold them into national productivity-boosting collectivities of achievement-oriented citizens (Sackley 2011, 2012). Additionally, he had developed a close rapport with Nehru and the Planning Commission, thereby impressing his views about mass communications and modernization on the Commission. As historians of the Ford Foundation's role in India have shown, Ensminger accomplished this through an uncharacteristically intimate relationship with Indian governing bodies, often sitting in on and contributing to Planning Commission meetings and at times even ghostwriting government reports on Foundation-assisted community development and agricultural extension programs (Sackley 2012). The influence of the Delhi office on the Indian state's development agenda was not limited to Ensminger: by 1967, the Delhi office would, under Ensminger's guidance, employ

[93] The Point Four Program refers to U.S. President Harry Truman's postwar international development plan, which set aside funding for U.S. involvement in economic and technical assistance in low-income countries. The U.S. Department of State began to promote agricultural extension in India in 1952 when it set aside almost $54 million towards those efforts as part of the Indo-American Technical Agreement and began to employ U.S.-trained extension experts as consultants to the Indian central government in New Delhi (Sackley 2012).

close to 72 American expatriate consultants—predominantly extension specialists—to assist Indian central and state ministries on Foundation-aided projects, oversee and evaluate the day-to-day execution of those projects, and help conduct their operations (Harkavy 1995). The largest of these projects in the early 1960s, and a brainchild of Ensminger's, was the Intensive Agricultural District Program (IADP) (Perkins 1997). Based on theories of agricultural extension, particularly the diffusion of innovations model, the IADP employed a series of interpersonal communication techniques and mass communications media to inform Indian farmers of biotechnological and mechanical innovations in farming, including hybrid crop seeds and chemical fertilizers, and convince them of the benefits of using these capital-intensive innovations. The point of the project, as historians Nick Cullather (2010) and John Perkins (1997) have documented, was to move Indian agricultural policy away from cooperative agricultural schemes—the likes of which had precedent in communist-run countries like the U.S.S.R and China—towards the large-scale financing of industrial and technologically-assisted farming techniques which necessitated massive infusions of capital into agriculture.

The Ford Foundation's involvement in Indian development programming started to receive more governmental and public attention by the turn of the 1950s (Sackley 2012). For his part, Raina was drawn to the emphasis that the office placed on partnering with the Indian government, as well as its stated commitments to behavioralist expertise on motivation and modernization. Aware of Ensminger's goals to promote the adoption of new biotechnological and chemical products in rural areas, he personally requested Ensminger in 1959 to assist the Central Family Planning Board as it carried out "a special programme for developing and testing, systematically, the most effective methods to communicate [the idea of family planning] to the

people."[94] He believed that the Foundation could do so by providing technical and educational equipment for training research units at various universities, engaging American consultants to help design field research and program implementation, and setting aside funding for fellowships to train Indian students in communications scholarship at U.S. universities. More importantly, Raina framed his request for grant money from the point of view of the "practical problems" of the program, stating that "many of the "action-research" personnel will eventually fill leading administrative positions in family planning work throughout India" and would be "much better equipped for this, through their experience with solving problems of communication and motivation in this field."[95]

To Ensminger, Raina's proactive request for Foundation assistance was well timed. Ever since his arrival in New Delhi in 1951, Ensminger had written often to the Foundation's New York headquarters, imploring its leadership to think seriously about directly subsidizing population control initiatives in India (Sackley 2012). In anticipation of future support for the endeavor, he engaged public health scholar and Ford Foundation consultant Moye Freymann to investigate knowledge of and attitudes towards fertility control alongside his work analyzing rural health in the southern Indian city of Madras. Until 1959, however, the Foundation had steered clear of doing so despite Ensminger's appeals, due in equal parts to the controversial nature of the issue, the reluctance of foreign governments and international organizations such as the UN to envision a global stance on population control, and the possibility of offending the "Catholic sensibilities" of the Ford Motor Company chairman, Henry Ford II (Harkavy 1995:93).

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[94] Letter from Raina to Ensminger, July 25, 1959, RAC, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reel 2609.

[95] Ibid.

Instead, the Foundation had limited itself to funding the issue indirectly, including supporting the research and operations of the Population Council.

The Foundation's newfound independence, however—brought on by Ford's departure as Foundation chairman and the Ford Motor Company becoming a publically traded entity in 1956—prompted its new leadership to heed Ensminger's call. Sensing a changed environment in New York, the Delhi office applied for a grant for "research in communications related to family planning," on the grounds that even though the Central Family Planning Board had done as much as it could to augment clinical facilities for contraceptive services in the country and jumpstart basic research in the physiology of reproduction and contraception in public universities, "there are serious gaps in another area of knowledge, namely, how to communicate with people concerning family planning."[96] Furthermore, Ensminger used core behavioralist language to make his case for the grant, promising that the grant would help "gain greater understanding of people's beliefs, attitudes, and values, and then systematically develop ways of interpreting family planning so as to make it more meaningful to the Indian people."[97] By arguing that "the method for such investigation… has been successfully used in India and elsewhere for introducing better agricultural and health practices," Ensminger's proposal directly outlined his plans to apply his knowledge about extension and communication to the domain of reproductive behavior, while urging the "quicker development of useful findings… to meet urgent program

[96] Request for Grant Action, August 26, 1959, RAC, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reel 2609.

[97] Ibid.

needs."[98] Put simply, Ensminger's appeal foregrounded the kinds of action research that Raina had long been championing but to which the Ministry of Health and Nayar had long been hostile.

A little over a month after Raina had made his first request of the Delhi office, the Foundation's trustees in New York approved a grant of $330,000 for the Union Ministry of Health and its family planning program.[99] The grant kickstarted the Foundation's involvement in action research in family planning communications in India, and was followed by a supplementary sum of $603,000 in 1961. Taken together, the grants were by far the largest amount of external assistance that the Ministry of Health had received for its family planning program until then.[100] They supported a number of initiatives including the provision of two communications research specialists with training in public health and the behavioral sciences to Raina's office; the building of six new family planning communications research units in universities and research institutes across the country including one at the Bombay Demographic Training Center and the Central Health Education Bureau in New Delhi; a program of fellowships for Indian graduates to be trained in communications research at U.S. institutions; a research fund for grants to university social science departments and medical schools in the country for communications-assisted action research in family planning; salaries for short-term, on-site American consultants with experience in communications research and extension

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[98] Ibid.

[99] Letter from Ford Foundation Secretary to V.K.B. Pillai, September 11, 1959, RAC, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reel 2609.

[100] Letter from Robert E. Culbertson to Ensminger, March 6, 1961, RAC, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reel 2609.

education; and a training program for community-level fieldworkers in performing extension education on contraception and family planning.[101]

Money was not the only resource that the Delhi field office harnessed to establish communications research on family planning in India. The office also focused on building infrastructural mechanisms for grant-making and the selection of domestic research fellows. In between the commissioning of the first major Ford Foundation grant and the second, Ensminger and Raina orchestrated the creation of a "Central Committee on Communications and Motivation for Family Planning" to oversee the disbursement of those grants as well as chart the course of the kinds of research the grants would support. [102]The establishment of the committee further blurred the lines between the Foundation and the Ministry of Health: it included not only the new Union Minister of Health Sushila Nayar, who had succeeded Amrit Kaur and used to be Gandhi's personal physician, Raina, and noted Indian economist and member of the Indian parliament Prasanta Mahalnobis, but also Ensminger himself.[103] The Foundation's grants to the Indian government were so unprecedented that, when news that they had been commissioned reached Council leadership, Dudley Kirk at the Population Council concluded that they

[101] Letter from Kirk to Balfour, February 22, 1961, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 799.

[102] LeRoy Allen Notes, November 10, 1960, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 804.

[103] "Organization of Communication Action and Research Program in the Central Health Education Bureau," July 14, 1960, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 796.

constituted a veritable "blank check" to Ensminger and the Ministry of Health to collectively set the agenda for the field.[104]

The Ford Foundation's rapid foray into family planning research and policymaking circles in India made an impression on the Population Council, which soon took bolder steps towards funding action research. What Ensminger's "blank check" meant was not lost on the experts at the Council, who were keenly aware of both Kaur's and Nayar's reluctance to give technological contraception greater prominence in the country's population management agenda, a situation that often put them at odds with a much more technologically optimistic Nehru and Planning Commission. The Ford Foundation's access to greater resources, however, augured a new and potentially more favorable climate for contraceptive promotion. The first of the Council's steps towards capitalizing on this new climate was hiring prominent public opinion scholar Bernard Berelson. While Stouffer's death had been a temporary setback, the Council persevered by appointing Berelson as Director of the nascent Communications Research Program in 1962, a position that he held until becoming Vice-president and, later, President of the Council. The Council's Board of Trustees explicitly asked Berelson "to see if material from the communication field could be applied to the family planning programs being developed around the world" (Berelson 1964:94). Like Stouffer, Berelson was a stalwart figure in the communication sciences, having been at the forefront of the behavioral turn in American political science. With Paul Lazarsfeld at the BASR, he had helped usher into political science new emphases on survey research, statistics, experimentalism, and the systematic study of

[104] Letter from Kirk to Balfour, February 22, 1961, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 799.

communication's role in shaping political opinion, behavior, and attitudes (Glander 2000).[105] Before his appointment to the Council, he had worked tirelessly to increase support for the behavioral sciences in the U.S. academy, heading the Ford Foundation's Behavioral Sciences Program from 1951 to 1957 and helping found the CASBS in California (Solovey 2013).

Except for Stouffer, Berelson was the first well-known communications scholar that the organization had hired for its executive staff. Notestein believed that Berelson's expertise in communications scholarship would enable both the Population Council to carry on "this frontier work" and the Demographic Division, in particular, to study "the ways in which information concerning family planning can be most efficiently spread, particularly in the world's technologically underdeveloped countries."[106] Berelson's appointment reflected the Demographic Division's new stance that the disconnect between biomedical efforts to create sophisticated contraception and low-income countries' abilities to translate those efforts into successful fertility reduction interventions, and that "the need for dissemination of knowledge of existing methods equals that of finding new and more satisfactory means of regulation of population growth."[107]

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[105] Berelson's work with Lazarsfeld resulted in two influential books on political opinion and voting, which helped ushered behavioralist perspectives and studies of mass communication into American political science. These included *The People's Choice* (1945) and *Voting* (1951).

[106] Letter from Notestein to Ensminger, January 23, 1962, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 802; Letter from Notestein to Martha Dalrymple, November 8, 1961, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 417.

[107] Copy of Press Release, n.d., RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 417.

Berelson's tenure at the Council would make the organization more favorable to action research. As the orchestrator of the Ford Foundation's Behavioral Science Program, Berelson was familiar with the Foundation's visions of social science in a postwar world. By 1959, as historians of communication sciences have noted, he had become disillusioned with the prospects for the interdisciplinary field and had begun impressing upon his colleagues to apply their insights to issues of global consequence and the "practical problems to which the discipline can contribute answers" (Berelson 1959:5-6). Convinced of the "correctness of his decision" to join the Council's staff, he felt that even a "few days [of] exposure to the problem" had shown him that it was the "most challenging opportunity for the behavioral sciences to apply themselves to matters of high policy importance."[108] Mere weeks into his appointment, at a conference in New York in 1962 titled "Emerging Techniques in Population Research," Berelson stated resolutely that:

> "The main problem, it seems to me, is to invent and develop ways to present the family planning message so that the practice will be most likely to be successfully adopted. Here is an opportunity for the communication researcher to turn inventor of communication techniques. Having come to this point of view, I have been spending a good deal of my time recently not with social researchers or cultural anthropologists, but with audio-visual experts, agricultural extension specialists, even marketing and advertising people with some background in such societies. And I am less concerned at the moment with sampling techniques… than with the appropriate use of flipcharts and flannelboards and

[108] Letter from Berelson to Notestein, October 25, 1961, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 417; Letter from Berelson to Richard Sheldon, January 25, 1962, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 417.

> filmstrips, the use of multiple sources of information, or the proper and understandable pictures to carry the family planning message […] In a sense, all of this does call for an "emerging technique" of a very large order: more attention to how research can directly contribute to policy guidance" (Berelson 1963:167)

A trip to India after the conference and a meeting with Ford Foundation consultant Moye Freymann and the Foundation's new "communications man" in the field, William Bert Johnson, cemented Berelson's views. Agreeing with Freymann's and Johnson's opinion that "applied" research was not highly valued in the population research field, he went on to suggest that what the field really needed were agricultural extension agents and marketing managers to apply themselves to the issue of overpopulation and fertility control.[109] Johnson took the opportunity to discuss the motivational agricultural package that the Foundation had designed for use in IADP. By the end of his trip to New Delhi, Berelson would consider himself "a convert to the administrative and implementational problems involved" in the Indian family planning program, which he believed deserved social scientific scrutiny with a view to changing how the program functioned on the ground.[110] Although he also considered himself a "neophyte" in the field of family planning, within a span of a few months, Berelson would be hard at work at developing a prototypic "kit" of materials ready for family planning "communication action research"

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[109] Letter from Berelson to Freymann, May 21, 1962, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 417; Letter from Berelson to Freymann, February 19, 1962, RAC, FA210, Population Council Records, Accession 1, Series 1, Box 28, Folder 417; Letter from Kirk to Freymann, January 23, 1962, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 417.

[110] Berelson's Notes, "Summary Impressions from India-Pakistan Trip," April 2, 1962, RAC, FA210, Record Group 1, Accession 1, Series 1, Box 29, Folder 429.

(FPCAR) experiments in India, Pakistan, and Taiwan.[111] In 1963, a year and a half after he had taken a sabbatical to join the Council, Berelson would be promoted to vice-president, a move that cemented the Council's newfound commitment to action-oriented research on family planning communications and motivation.

4.3. Transforming "Family Planning Extension" into Government Policy: The Third Five-Year Plan and the Shift from Family Planning Clinics to Family Planning Communications

By 1962, the Ford Foundation's field office, led by Ensminger, and the Population Council, led by Notestein and Berelson, had become flag bearers for the application of theories of mass communication and opinion change to the Indian family planning program, with Raina in what was a relatively small Department of Family Planning office operating as their Indian counterpart. Beyond having coordinated the disbursal of monies towards family planning communications research, the Ford Foundation had yet to see the central government put its larger grants to use in the programmatic implementation of family planning on the ground. Moreover, Raina was struggling was an understaffed office of no more than twenty employees (Connelly 2006).[112]

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[111] Letter from Berelson to Freymann, February 19, 1962, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 804; Letter from Notestein to Ensminger, June 5, 1962, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 802; Letter from Berelson to Freymann, November 13, 1962, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 804.

[112] Letter from Allen to Kirk and Mauldin, May 11, 1959, RAC, FA432, Record Group 2, Accession 2, Series 2, Box 83, Folder 795.

In 1963, however, their goals were realized. The mid-year review of the Third Five-Year Plan of 1961-1966 saw the Central Planning Commission and the Ministry of Health signaling their collective intention to set aside a larger amount of resources towards what they termed "family planning extension," an explicit reference to the science and practice of agricultural extension.[113] Moreover, the Planning Commission—startled by the results of the 1961 census—had already elevated population limitation to the "very centre of planned development…not merely as a major development programme, but as a nation-wide movement which embodies a basic attitude towards a better life for the individual, the family and the community."[114] At the annual meeting of the CFPB in April 1963, Nayar introduced the Ministry of Health's new approach to its family planning agenda going forward. Stating that in order to "catalyze" the adoption of "a new social norm which [favors] small family size on a mass scale," Nayar promised that the new approach would include "community level education work," apply the results of family planning communication and motivation research, and eschew a sole focus on technologically sophisticated methods for "simple contraceptive devices" and techniques. She also called for the creation of training programs for the development of family planning extension workers and the expansion of training for medical authorities in existing clinical settings. Nayar's willingness to make contraceptive supply and promotion a central standard for

[113] "Address by Dr. Sushila Nayar, the Union Minister, at the Fourteenth Meeting of the Central Family Planning Board at New Delhi," April 8, 1963, RAC, FA739A, Ford Foundation Records, Catalogued Reports (Reports 1-3254), Box 41, Folder 001015.

[114] "Third Five-Year Plan," Planning Commission, http://planningcommission.nic.in/plans/planrel/index.php?state=planbody.htm., Retrieved on March 18, 2017.

the program showed just how far she willing to depart from her earlier views on birth control in light of new census data.

Additionally, the Ministry of Health was moving quickly to institute a separate wing devoted to family planning, larger and better staffed than the office that Raina currently commanded.[115] In 1965, Raina would relinquish his position at the reorganized Ministry to direct a new, government-sponsored organization called the Central Family Planning Institute, which was expressly intended to conduct research on family planning that would be of use to the Ministry as it formulated new programmatic initiatives.[116] In 1964, after Nehru's sudden death and the appointment of his daughter Indira Gandhi as the new Prime Minister of India, Gandhi's cabinet renamed it the Ministry of Health and Family Planning. In 1967, Gandhi named noted Indian demographer and Member of Parliament Sripati Chandrasekhar as Nayar's successor, further underscoring the importance that Gandhi's administration gave population limitation in line with her father's wishes.[117] Under Gandhi's leadership and Chandrasekhar's tenure as Minister, the Ministry of Health and Family planning would pressure India's state governments to prioritize family planning extension and begin proactively promoting the creation and dissemination of persuasive information on birth control and small nuclear families.[118]

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[115] "Over 77M. Rise in Population: Employment Fails to Keep Place," September 12, 1962, *The Statesman*, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 87, Folder 835.

[116] "Minutes of the First Meeting of the Executive Council of the Central Family Planning Institute," January 28, 1965, NMML, Asok Mitra Papers, Series III, File No. 517.

[117] "Sripati Chandrasekhar, Indian Demographer, Dies at 83," *New York Times*, June 23, 2001.

[118] Notes on Development Communications for Family Planning, Government of India, May 13, 1965, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 799.

Chandrasekhar threw his weight behind sterilization, stating, as well, that the government would do well to target men as potential users of birth control (Brownlee and Johnson 2004).[119]

Given the newly energized action-oriented policymakers and experts at the Ministry of Health and Family Planning and the Population Council in the mid-1960s, Raina was able to openly pursue FPCAR without invoking consternation. At the same time, the CFPI's action research agenda continued to be shaped by American private foundation officials and experts in concert with its Indian researchers and organizational staff. The Ford Foundation's field office placed its highest-ranking family planning consultant Moye Freymann in an ad-hoc committee in charge of refining the CFPI's research agenda.[120] In addition, Dudley Kirk from the Population Council's Demographic Division prevailed upon Raina to let Donald Bogue observe the CFPI's selection process for the Council's Demographic Fellowship program when Bogue visited India later that year. Kirk hoped that Bogue's presence would ensure that the CFPI made choices that were amenable to the Council's plans to support family planning communications and motivation research.[121]

The CFPI's ad-hoc committee also included Asok Mitra, another prominent Indian demographer who had previously been India's Census Commissioner for the 1961 census and who was now the Secretary of the Union Ministry of Information and Broadcasting. Mitra's presence on the committee and his new role in government reflected the scholarly confluence

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[119] Ibid.

[120] "Minutes of the Fourth Meeting of the Executive Council of the Central Family Planning Institute," November 15, 1965, NMML, Asok Mitra Papers, Series III, File No. 517.

[121] Letter from Kirk to Raina, January 4, 1964, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 797.

between demography and communications expertise in the Indian setting. He eventually became a staunch advocate of teaching FPCAR in Indian social science research institutes both during and long after his tenure at the Ministry of Information and Broadcasting.[122] He would also lead discourse on how to put family planning extension expertise into practice on the ground, vetting government-authored mass media and communications materials on birth control and contributing to their design.[123]

Not satisfied with only making grants available to the Indian government, Ensminger had grander plans for the Ford Foundation's role in the Indian program. In particular, he sought a way to place the Foundation's own behavioralist stamp on the program, much like it had done with community development and agricultural extension. Based on the design of the IADP, Ensminger proposed an "Intensive District Program" in the domain of family planning and went to work with the Ministry of Health to design and execute it.[124] The program identified one district for each of India's 15 states at the time that would serve as a "demonstration" site for family planning extension education. The Ford Foundation recommended that the Indian government institute a separate organization in order to evaluate whether family planning extension activities, and specifically the Intensive District Program, were having their intended impact in terms of increasing contraceptive use and changing public attitudes towards small

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[122] Letter from M.N. Srinivas to Mitra, December 9, 1968, NMML, Asok Mitra Papers, Series I, File: "Srinivas, M.N"; Letter from Ensminger to Mitra, July 26, 1968, NMML, Asok Mitra Papers, Series III, File No. 450.

[123] Letter from Mitra to Narain, May 30, 1968, NMML, Asok Mitra Papers, Series III, File No. 797.

[124] Letter from Ensminger to George F. Gant, April 29, 1964, RAC, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reel 1996.

families. In Ensminger's view, this organization would also be tasked with providing training to family planning extension workers. This led to the conception of the National Institute of Health Administration and Education (NIHAE), designed collectively by Ensminger and Freymann, the Delhi field office, and the Ministry of Health.

To cope with the increasing involvement of the Foundation in the Indian program's design and implementation, the Delhi office greatly expanded its family planning wing. Bert Johnson was given a more prominent role in the expanding group as the group's special consultant with regard to family planning communications.[125] By 1966, another communications specialist named Frank Wilder would be brought to the field office to further specify how mass media techniques could be used effectively to promote birth control and serve as a liaison between the office and the Ministry of Health and Family Planning. Wlder worked closely with Dharmendra Kumar ("D.K.") Tyagi, the new Assistant Commission for Family Planning in the rechristened Ministry for Health and Family Planning.[126] Together, Wilder and Tyagi made a new case for an easily identifiable symbol for India's program: an inverted, red triangle with a simply drawn picture of a nuclear family with two children. Meanwhile, Berelson and his colleagues had begun to make the Population Council's prototypic toolkits of family planning media available to Ford's officials in India.[127]

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[125] Sheldon Segal's Diary Notes, February 2, 1965, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 799.

[126] Memo from Rey M. Hill to Berelson, April 5, 1967, RAC, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reel 1996; Edward M. Humberger, "Population Program Management: The Ford Foundation in India 1951-1970," April 22, 1970, RAC, FA739B, Catalogued Reports (Reports 3255-6261), Box 166, Report 003673.

[127] Frank Wilder, "Report—September and October, 1966," RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 799.Letter from Robert Blake to Berelson, February 2, 1965, RAC, FA432, Population Council Records, Record Group 2,

In order to kickstart the NIHAE's training program in the mid-1960s, the Ford Foundation provided fellowships for around twelve Indian family planning officers to attend public health administration training courses in the U.S. As the ex-Ford Foundation official Oscar Harkavy has noted, at the time no major public health graduate program in the U.S. had expertise in family planning administration and implementation; to ensure that these programs were able to train Indian officers and, eventually, those from other countries, the Foundation made a number of high-profile grants available to over sixteen U.S. universities to augment their offerings in population studies, demography, and family planning, including the University of Michigan, Harvard University, and the University of North Carolina at Chapel Hill (Greenhalgh 1996; Harkavy and Roy 2007).[128]

It was not a surprise, therefore, to observers of the Indian program that in the few short years since the Ford Foundation's first grant to the Indian population policy establishment the "identification of the Ford Foundation with India's Family Planning Programme [was] greater than ever."[129] According to the Population Council's Sheldon Segal, who had just completed a two-year residency in India, Ensminger "now viewed himself as intellectually involved with ideas of his own as to what is right or wrong for family planning in India." Indeed, the focus on family planning in the Delhi office had grown to such an extent that, by February 1965, its

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Accession 2, Series 2, Box 84, Folder 799; Letter from Clifford Pease to Blake, September 24, 1965, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 799.

[128] "Funding for University Population Studies Centers," 1972, RAC, FA739B, Ford Foundation Records, Catalogued Reports (Reports 3255-6261), Box 271, Folder 006088.

[129] Sheldon Segal's Diary Notes, February 2, 1965, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 799.

family planning wing required an entire building unto its own.[130] Even so, whether or not Ensminger's efforts were bearing fruit on the ground was up for debate: five years after the first grant for the Intensive District Program was made in 1961, there were still no signs that the program was going to get underway in the states.[131] The program would not begin until two years later in 1968.[132]

Despite the roadblocks that the Foundation encountered with the Intensive District Program, it was clear that Ensminger and the Ford Foundation had changed the tenor of government discourse on health and family planning. Whereas the central government had initially promoted what foundation officials and the Population Council believed was a "passive," clinic-based model, the 1960s saw the government bringing a wholly different set of "proactive," social psychological approaches into the mix. Throughout the 1960s and the 1970s, a number of state governments hosted intensive area campaigns oriented around the use of mass media and influential community leaders to promote various forms of birth control, predominantly sterilization. These would often be advertised as "Family Planning Weeks," "Fortnights," and "Months," with news of the campaigns airing on the radio and printed in local newspapers.[133]

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[130] Ibid.

[131] Ibid.

[132] Memo, Lyle Saunders, June 4, 1968, RAC, FA678, Population Program, Office Files of Tim Rice, Series VI, Box 14, Folder: "General Correspondence – 1967-1969."

[133] "Ten Weeks' Intensive Campaign to Promote Family Planning in Ambala District and Punjab State," RAC, FA , Population Program, Office Files of William O. Sweeney, Series V, Box 6, Microfiche; "5th Meeting of Central Family Planning Council, Nainital, April 17-19, 1968," NMML, Asok Mitra Papers, Series III, File No. 519; Letter from Davidson Gwatkin to Mitra, December 16, 1975, NMML, Asok Mitra Papers, Series III, File No. 559; Directorate of Field

Furthermore, by the end of the 1960s, the Ministry of Health and Family Planning had formed a close working relationship with the Ministry of Information and Broadcasting and its Directorate of Audio-visual Publicity (DAVP) to create a wide variety of family planning media, including posters, leaflets, and newspaper advertisements. Perhaps the most significant of their collaborations centered on the construction of family planning "cells" in central and state offices of the state-directed national radio channel All India Radio (AIR), a subsidiary of the Ministry of Information and Broadcasting.[134] These cells were responsible for the creation of regular broadcast programs on family planning, featuring interviews with family planning "beneficiaries" and experts as well as elaborate storylines about family planning involving popular "stock characters" experiencing the "emotional tensions of large families." AIR was intent on its programs highlighting the "role and responsibility" of men to contracept in addition to women, stating that it was committed to performing on-air "cost-accounting about each child added to the family" in order to shine a light on the economic gains that men stood to benefit from if they prioritized family planning.[135]

Over time, Indian population policymakers began to argue that if, indeed, American experts wished for them to prioritize the use of mass communications and media in the country's development agenda, then they should also prioritize the transfer of communications technology

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Publicity – Ministry of Information and Broadcasting, "Public Reactions to Government Policies and Programmes," July-November 1970, NMML, Asok Mitra Papers, Series III, File No. 799.

[134] "A Note on the Pattern, Type and Quantum of Family Planning Programmes from the Stations of All India Radio," Directorate General – All India Radio, 1974, NMML, Asok Mitra Papers, Series III, File No. 371.

[135] Ibid.

and capacity—and not merely contraceptive technology and biomedical expertise—from the U.S. to India. In the early 1970s, these discussions would lead to a collaboration among the Union Ministries of Agriculture and Health and Family Planning, the Indian Space Research Organization (ISRO), All India Radio, Ford Foundation communications experts, and the U.S. National Aeronautics and Space Administration (NASA) to construct a massive experiment to test the capabilities of satellite television in the Indian context.[136] The collaboration aimed to bring those capabilities to India with the express purpose of helping the Indian government apply them to its various development programs, especially but not limited to agriculture and family planning. Named the Indian Satellite Instructional Television Experiment (SITE), the study was a yearlong investigation into whether and how periodic satellite television broadcasts on various development-related topics—in particular, family planning—would be more effective in spurring aggregate changes in public opinion on those topics (Fig. 10). AIR was in charge of providing the "software" for the experiment, namely program content for these broadcasts. Broadcasts were aired twice a day, every day, for the entire year between 1975 and 1976 to over 2400 Indian

[136] Interoffice Memo to the Files, John Cool, "SITE Status Report," March 23, 1971, Folder: "India – SITE, 1970-71," International Activity Files Relating to the Indian Satellite Instructional Television Experiment (SITE), 1/1/1967 - 12/31/1977, Box 1, Records of the National Aeronautics and Space Administration, 1903-2006, Record Group 255, U.S. National Archives and Records Administration Building (College Park, MD); White House Memo, Henry Kissinger to Arnold Frutkin, "Foreign Educational Uses of Communications Satellite," Folder: "India – SITE, 1970-71," International Activity Files Relating to the Indian Satellite Instructional Television Experiment (SITE), 1/1/1967 - 12/31/1977, Box 1, Records of the National Aeronautics and Space Administration, 1903-2006, Record Group 255, U.S. National Archives and Records Administration Building (College Park, MD); "Satellite Communication and Family Planning," Audio-visual Instructional Division - ISRO, Folder: "India – SITE, 1970-71," International Activity Files Relating to the Indian Satellite Instructional Television Experiment (SITE), 1/1/1967 - 12/31/1977, Box 1, Records of the National Aeronautics and Space Administration, 1903-2006, Record Group 255, U.S. National Archives and Records Administration Building (College Park, MD).

villages. Village residents were interviewed prior to the experiment and then at regular intervals after it had begun in order to determine whether their opinions on relevant topics had changed as a result of viewing the broadcasts.

Figure 10. ISRO technicians install a satellite television dish and television set in the Kerelli village in Andhra Pradesh for the Satellite Instructional Television Experiment (SITE), c. 1975. Source: Photograph nos. 75-H-703 and 75-HC-285, BARA Photography, Inc., International Activity Files Relating to the Indian Satellite Instructional Television Experiment (SITE), 1/1/1967 - 12/31/1977, Box 1, Records of the National Aeronautics and Space Administration, 1903-2006, Record Group 255, U.S. National Archives and Records Administration Building (College Park, MD).

4.4. Conclusion

This chapter has illustrated how the Indian state, in response to communication scientists' arguments, instituted wide-ranging communications campaigns to convince citizens to believe in the virtues of contraception and small nuclear families. In large part, the Indian state's willingness to change its approach to popularizing family planning was buttressed by its

longstanding relationships with private foundations, such as the Ford Foundation, and independent population research organizations, such as the foundation-funded Population Council. The Ford Foundation's leaders in India, in particular, served to link Indian policymakers, American and Indian social scientists working on the issue of family planning communications, and state-level bureaucratic agencies in charge of implementing extension programs—chiefly because of their own prior training in the social sciences and, especially, the sciences of agricultural extension and mass communications.

Although it is not discussed in this project, these transformations in the meanings behind and regulation of reproduction provided new grounds on which scientists and policymakers in India and the United States debated the politics not only of birth control itself but also of *communicating information about* birth control on a mass scale—a key distinction that extant scholarship on twentieth-century debates over birth control have largely ignored (exceptions include Beisel 1998; Parry 2013). Detractors of such strategies believed that they constituted mass "persuasion," which stoked fears about coercive threats to Indian citizens' autonomy and the legitimacy of the democratic state. In contrast, supporters viewed it as scientifically sanctioned "publicity" for the national good, citing how the *empiricist* desire to understand how information worked was inherently antithetical to the unethical practices of persuasion, manipulation, and coercion more readily associated with political propaganda.

Nevertheless, leading family planning communications scholars began to defend themselves against new ethical concerns raised by reproductive rights activists, the international development community, and medical ethicists that their scholarly recommendations toed the line between impartial publicity of factual information and propagandistic persuasion. Scientists argued that the desire to *empirically* theorize mass communication did not inherently promote

coercion; instead, governments were to be held accountable for implementing research in undemocratic ways. In their opinion, the right information could powerfully "motivate" people to change how they made decisions about procreation. In a 1967 book titled *Mass Communication and Motivation for Birth Control,* Donald Bogue took the lead. Devoting an entire chapter to the ethical distinctions between "information" and "propaganda," Bogue emphatically argued that the former involved the "communication of facts to help people see reality as it really exists" while the latter consisted of "emotional appeals and the exaggeration, distortion, or suppression of facts" to manipulate people into adopting certain attitudes and practices (1967:179). Stressing that communication scientists were solely concerned with the former, he contended that the ethical soundness of communication science lay in its emphasis on the dissemination of information to appeal not to people's emotions but to their "intellect" (1967:179). Far from a coercive intervention into people's autonomy, mass communication was a measurable entity with measurable effects, concerned with the broadcasting of "facts." In the case of birth control, such facts included information about contraception, the virtues of small families, and family planning services.

Others were not so convinced. A decade later in the journal *Studies in Family Planning,* as the Indian Emergency Period was winding down and the Gandhi-led administration was voted out of power, medical ethicist Robert Veatch urged his readers to reconsider the "ethical issues at stake" in twentieh-century population control programs in the developing world (1977:100). Veatch critiqued their growing emphasis on using communications techniques, like social marketing and economic incentives, to induce people to change their reproductive practices, arguing that such techniques risked "engineering consent," especially when they typically occurred in the context of abject poverty.

Bogue's and Veatch's opposing stances exemplified a series of heated debates among scientists, policymakers, intellectuals, and lay citizens in the 1960s and 1970s on the ethics of mass communication strategies in family planning and population control programs. Thus, tensions existed between how scientists deemed their empiricism ethically "neutral" and how they aimed to aid policymaking with explicit goals. This had implications for how various actors critiqued or defended the contested relationship between science's role in policymaking and the state's role in guaranteeing both the national good and individual autonomy. Future research can further investigate how social scientific research on family planning became a key site for ethical deliberations over the political notions of democracy, liberty, and autonomy, as well as the promises and pitfalls of social science's historical involvement in reproductive governance.

CHAPTER 5

A Master of His Fate: Genderered Technoscience and the Reproductive Regulation of Indian Men (c. 1960-1977)

5.1. Introduction

As the previous chapters have analyzed, social scientists painted mass communications technologies and techniques as the right tool to tackle the job of population control n in India. In turn, as a result of interactions among a number of relevant social worlds, including private foundation officials, American and Indian social scientists, and Indian policymakers and planners, the Indian state—led by the Planning Commission and the CFPI—made "family planning extension" a vital part of its national population control program in the early 1960s, basing these efforts on insights from the new field of family planning communications. According to research in the field, increasing access to contraceptive technologies and clinical infrastructures could not guarantee that people would use them. Preceding the voluntary adoption of any technology, in their view, was the willingness to use it and a belief in its importance. Arguing that the basic motivation to use contraception and the understanding that using contraception held several economically consequential benefits for the family did not exist to a great extent among the Indian population, they asserted that mass communication had the power to effect these widespread changes in public opinion by intervening in the psychosocial aspects of reproductive decision-making. The Ministry of Health and Family Planning, faced with new instructions from the Planning Commission and the CFPI to allocate more of its funds to collaborations between itself and the Ministry of Information and Broadcasting, made the implementation of family planning extension a core part of its directives to individual state governments.

Although social scientists had made the case for mass communications as a technoscientific solution to India's population control efforts, the question remained as to who constituted the appropriate "audience" for those messages. While their research implied that this audience was the companionate marital couple, in practice communications experts took a decidedly more gendered tack when it became clear to them that nuclear families were not common in India.

The following chapter shows how social scientists marshaled prevailing conceptualizations of masculinity and male social and economic power to argue that, in the Indian context, men were better suited as targets for mass communications on birth control, conduits for the promotion of nuclear families, and, consequently, prospective contraceptive users. First, experts argued that Indian men, relative to Indian women, were more frequent consumers and users of mass media and communications technologies on account of their apparently greater levels of participation in public life. In addition, as social scientists wished to convince Indian citizens of the economically beneficial consequences of contraception and planned conception, they cited Indian men's conventional roles as economic decision-makers in Indian familial and social contexts as further reasons for why persuasive communications on birth control needed to target male audiences. In their view, economically oriented messages on the virtues of family planning would be wasted on women, the majority of whom, they argued, generally did not occupy the same roles in their families and communities. Finally, communications experts argued that Indian men's social positions in extended kinship structures made them ideally suited to undoing those very structures and the "ineffective" communication patterns on which they were based—in the process, paving the way for the acceptance of the nuclear family organized around companionate marriage.

These gendered arguments prompted Indian family planning officials to target a vast majority of family planning extension materials and activities at men, exhorting them to practice contraception, engage in companionate marriage, and desire fewer children while framing these goals in economic terms. To ensure that these persuasive efforts resulted in contraceptive adoption, the Indian state also began to subsidize condoms and vasectomies as part of its extension efforts. From the early 1960s through the late 1970s, the frequency of vasectomies in India —particularly in government-led "mass vasectomy camps"—far outstripped that of female sterilization, while the government-manufactured condom brand "Nirodh" became one of the largest "social marketing" campaigns the Indian state had undertaken until then (Jain 1973). Put simply, men became implicated actors in programs promoting contraceptive technologies due to their status as prospective users of *communications* technologies as well as longstanding assumptions about masculinity, economic and public participation, and rational thought.

The scientific and political emphasis in the Indian case on governing men's relationships to reproduction complicates prevailing sociological and feminist STS explanations for the role of gender in reproductive regulation and how knowledge and technoscience mediate this relationship. Specifically, this history brings up important and underexplored questions about how and when men become *imaginable* as appropriate subjects of reproductive governance and technoscientific interventions into reproduction, especially in a broader context dominated by the medicalized and biomedicalized surveillance of women's bodies. In the following analysis of the Indian case, I show how the gendered technoscience of family planning communications scholarship redefined reproduction as a cognitive phenomenon involving information sharing, communication, and calculative decision-making. Communication scientists argued that persuasive mass communications on birth control targeted at "decision-making" Indian men

would more effectively create favorable attitudes towards small nuclear families and increase contraceptive use, thereby implicating men as germane audiences of mass media on contraception. This scientific casting of Indian men as indispensable targets of reproductive regulation and as viable contraceptive subjects prompted Indian family planning officials to create novel behavioral interventions into men's reproductive bodies and beliefs, exhorting them to practice contraception and desire fewer children.

It bears noting, however, that the scientific claims analyzed here diverge from broader debates on men's inclusion in postwar family planning agendas in the 1960s and 1970s, many of which centered on international feminist activists' arguments to encourage gender egalitarianism in contraceptive responsibility and their efforts to frame men's inclusion in family planning as a matter of women's equality (Dudgeon and Inhorn 2003; Gutmann 2007; Oudshoorn 2003).[137] Unlike their feminist contemporaries, communication scientists sought to capitalize on men's power—both tangible and presumed—in the family and broader social communities in order to maximize the capacity of the state to achieve its biopolitical aims. If concerns for gender parity accompanied these agendas, they played second fiddle to goals of reducing fertility and popularizing alternative familial forms organized around conventional notions of masculine dominance.

5.2. Characterizing Indian Men as Economic and Social "Decision-Makers": Gendering Theories of Mass Communication and Opinion Leadership

[137] For an extended discussion of international feminists' debates on the inclusion of men in family planning and contraceptive promotion programs, see Oudshoorn (2003).

Arguments to target men as audiences for mass communication campaigns on birth control anchored some the earliest debates on the application of communications theories to demographic studies on family planning and demographically informed policymaking. In particular, these arguments drew on both the diffusion of innovations theory and the theory of opinion leadership and the two-step flow of mass communication. In contrast to the rural sociological literature and public opinion scholarship in which these two theories originated, however, family planning communications scientists took the sex, gender, and social backgrounds of their research participants seriously. Coupled with disciplinary goals to understand reproductive decision-making, this created an intellectual context that enabled scientists to entertain the idea that, in India, men were going to be important players in that process. Not only did they contend that mass communications on birth control would steer Indian citizens towards what they termed "modern" reproductive decisions—a desire for small nuclear families and the calculated use of contraception—but also that they would be more successful if targeted at decision-making men and the ostensibly male base of communications technology users.

The seeds for these arguments were first sown among American donor organizations and foundations, which then proceeded to promote those arguments with researchers and policymakers in India. This further underscored the former's significance as a set of social world "entrepreneurs," responsible in great part for the creation of male-oriented family planning communications research and its implementation in Indian population policymaking. One of the first studies on Indian men's reproductive attitudes was conceptualized as early as 1957, when the Rockefeller Foundation's representative in India, Marshall C. Balfour, wrote to N.V. Sovani, Joint Director of the Gokhale Institute for Politics and Economics (GIPE) in Poona, Maharashtra,

to recommend a survey on vasectomy acceptability in the state.[138] Moreover, he suggested that Population Council's Demographic Division might be a welcome sponsor for the study, and offered to write to the Division head, Dudley Kirk, to secure this funding. Balfour's presence in these debates was not unprecedented: he had been the Rockefeller Foundation representative in charge of its fateful mission to Japan in late 1940s alongside erstwhile OPR demographer Frank Notestein. After the mission had completed its report in 1950, he was posted in New Delhi as a consultant to the Foundation's International Health Division, where he had taken it upon himself to promote more behavioralist research on population and family planning in Indian social science research institutes. In turn, he sought out the assistance of his old colleagues and acquaintances at the Population Council to do so, writing to Kirk about the usefulness of ascertaining men's beliefs about contraception and their responses to motivational communications on family planning. Kirk was altogether receptive, stating that he would "not wish to be at all sticky on the idea that the Council should not be a direct sponsor of the project."[139]

While the Manchar Study was being fielded in the late 1950s, Balfour and Kirk's attempts to think through the potential role of men in increasing the "effectiveness" of family planning programs were bolstered by Stouffer's agenda-setting visit to the Population Council during that time period. As analyzed in Chapter 3, Stouffer had explicitly cited the diffusion of

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[138] Letter from Balfour to N.V. Sovani, April 30, 1957, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 85, Folder 808.

[139] Letter from Balfour to Sovani, October 10, 1957, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 85, Folder 808; Letter from Kirk to Balfour, December 4, 1957, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 85, Folder 808.

innovations theory and the theory of the two-step flow of mass communications as scholarly polestars for researchers interested in attitudinal and behavioral change in the domain of reproductive decision-making. At the same time, he introduced gender as a variable moderating the effects of these theories in that domain. Before his death in August 1960, Stouffer had impressed upon his would-be colleagues at the Council his view that men might be the key to contraceptive adoption among agrarian societies that boasted of traditional and extended kinship networks. He had also begun a study with J. Mayone Stycos in Jamaica on the role of male social "leaders" in the popularization of family planning and contraception (Hill, Stycos, and Back 1959).[140] A primary reason for Stouffer's focus on men was his belief that the presumed "failures" of contraceptive innovations in Puerto Rico and Jamaica—in particular the Emko foaming jelly—could be traced to husbands' disinterest towards contraception in those societies and, at times, their outright hostility towards it. Stating that a "big problem may be [the] husband," he called for "[getting] literature" and leaflets on contraception to husbands and fathers, "[getting] husbands to talk with husbands of other Emko users," and "intensive interviews" with male study participants. In addition, he promoted a "strong pitch for condoms [and] coitus interruptus" over female-oriented medical and barrier methods in this literature and using "cognitive" techniques to reinforce the "advantages of family planning" for "the self" and his family's economic status.[141] Thus, Stouffer was not simply advocating for the targeting of men and the promotion of established, male-initiated contraceptive methods: he made this

[140] Samuel Stouffer, "Some Cocaine Vagaries of S.A.S," Transcription by Population Council Staff, August 16, 1960, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 32, Folder 468.

[141] Ibid.

argument on the basis of the assumption that men could be prevailed upon to consider—and appreciate—the economic benefits of planned conception. Moreover, he insinuated that the process of inculcating these beliefs and its attendant effects on contraceptive use could be made more successful by intervening in communication networks among men and capitalizing on men's putatively greater exposure to mass media, thereby articulating both theories of communication in decidedly gendered terms. The notion that women could be similarly enjoined to consider the benefits of contraception from an economic standpoint was noticeably absent from Stouffer's thinking; on the contrary, Stouffer and his colleagues at the Population Council saw no immediate issues with presuming men to be economic spokespersons for women.

After being promised Population Council funding, Sovani responded that the GIPE would be happy to oversee such a study in Poona's Manchar district. The Manchar Study, which began three years later in 1960, not only sought to understand men's attitudes towards vasectomy but also to provide village residents with information on sterilization and equip a local clinic to perform vasectomies. While the informational component resulted in around 20 men opting for the procedure, the survey of attitudes towards vasectomy administered to over 1062 men provided the grist for arguments to promote the technique.[142] Kumundini Dandekar, an Institute demographer who had been trained at Princeton's Office of Population Research, analyzed the survey data to conclude that residents ceased to be averse to vasectomy once they were told that it did not result in loss of sexual virility. Writing to Population Council president Frank Notestein, Dandekar recommended that vasectomies be promoted for the "general population" in

[142] Letter from Kumundini Dandekar to Balfour, April 6, 1962, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 85, Folder 809.

India and not solely for men with disabilities and communicable diseases.[143] Dandekar's advice on promoting vasectomy for the "general population" referred to the fact that throughout the 1950s the Indian central government had favored debates on legislation recommending sterilization for people with intellectual disabilities as well as those with communicable diseases like Hansen's disease (known also as "leprosy").[144]

Stouffer's thoughts emboldened the Population Council to continue supplying Demographic Division funds to GIPE for the study, thereby setting the stage for the Council's interest in understanding men's roles in the "diffusion" of the small family norm and contraceptive technologies among Indian rural communities. The Manchar Study not only set precedent for a slew of social scientific investigations into Indian men's reproductive attitudes but also heralded deepening channels of scientific exchange among social scientific elites, philanthropic foundations, and the Indian government.

These relationships were strengthened in 1963 when Bernard Berelson succeeded Notestein as president of the Population Council. As Chapter 3 showed, Notestein had hired Berelson the previous year to direct the Demographic Division's new communications initiative, expressly citing his expertise in the science of mass communication.[145] In his tenure as Council president Berelson took it upon himself to extend research on the role of mass communication in

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[143] Letter from Dandekar to Notestein, April 6, 1962, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 85, Folder 809; Dandekar, "Effect of Vasectomy on Sexual Desire," RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 85, Folder 809.

[144] On the history of legislative debates on state-mandated vasectomies of men with intellectual disabilities and Hansen's disease in postcolonial India, see Buckingham (2006).

[145] Press release, November 27, 1961, RAC, FA210, Population Council Records, Record Group 1, Accession 1, Series 1, Box 28, Folder 417.

shaping men's reproductive attitudes, convinced of its necessity in India. To do so, he reached out to B.L. Raina at the Department of Family Planning, insisting that older methods of contraception like condoms and withdrawal—methods wherein men were presumed to have made the contraceptive "decision" (Kiser 1962)—not be forgotten in the rush to popularize new female methods like the IUD.[146]

In saying so, Berelson drew on Stouffer's earlier suggestions about the same contraceptive methods and what they connoted about the presumably longstanding roles that men had held in sexual and familial relationships. He was, however, also providing a more decisive reading of those methods and what they meant in grander demographic terms, building on Kirk's statements at the Sixth International Conference on Planned Parenthood in New Delhi a few years prior. At the conference, Kirk had railed against a myopic focus on technically sophisticated contraceptive technologies, reminding his audience, which had included Raina, that demographers and other social scientists now concurred that the original "demographic transition" in Western Europe was brought about, in great part, by those methods in increasingly urbanized and industrialized contexts—and, therefore, that men had taken the active and calculative lead in the behavioral changes that had accompanied the transition. As such, Berelson and Kirk helped frame—albeit retroactively—newly gendered conceptualizations of these two theories as pointing to the behavioral *mechanism* by which urbanization and industrialization had led to fertility declines: namely, men's decision-making.

Thus, the diffusion of innovations and opinion leadership theories operated as conceptual lenses through which prevailing ideologies of gendered difference that readily associated men

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[146] Letter from Berelson to Raina, September 19, 1963, FA432, RAC, Population Council Records, Record Group 2, Accession 2, Series 2, Box 84, Folder 797.

with “rational” decision-making were reflected. Having reframed family planning as a cognitive phenomenon involving a degree of calculation and forethought as well as an endeavor that needed to be promoted as an economically consequential one, scientists continually referred to Indian men’s ostensibly greater contributions to economic decision-making, their greater participation in social networks of communication in the public sphere, and their propensity towards activities that involved calculative reasoning. In turn, they argued that mass communications on birth control that were framed in economic terms and “strongly oriented to husbands and fathers” (Bogue 1962:511) would exert a powerful effect on contraceptive use (Berelson 1964). Bogue, for example, stated that Indian husbands, more so than wives, would be receptive to messages about the ameliorative economic effects of smaller families due to their status as economic decision-makers (Bogue 1962, 1964). According to him, such educational efforts needed to appeal to Indian men’s roles as economic decision-makers by framing reproduction as a rational phenomenon deserving of calculative scrutiny. Alienating husbands in the Indian program was, thus, a grave misstep according to Bogue, who stated:

> There are many reasons why men should be favorably disposed to accepting family planning. *They* earn the living and bear the major responsibility for feeding, clothing, and housing the family. *They* know the total family budget and can see the disparity between the cost of a comfortable living and the income earned. *They* lose status in the eyes of their colleagues if they are unable to support their family, or lose face with their relatives if they must turn to the greater family for support. Hence, there is much reason to suppose that husbands are able to see the economic advantages of the small family. (1962:514; emphases in original)

Afraid that a "failure to approach the family via the husband" would "greatly heighten male resistance to family planning" and sound the death knell of the Indian program (Bogue 1962:512), Bogue attested that there was "very little cultural or sociological basis to support a program in which the wife takes the lead in gaining information about family planning and convinces an unwilling or disinterested husband… Making the male the primary target for educational and motivational efforts conforms to the realities of the "power structure" within the Indian family" (1962:512).

Unfortunately, these hasty conclusions about Indian women's lack of decision-making power obscured important facets of women's agentic roles in the family, the economy, and their communities, thereby reinforcing the notion that Indian women were less oriented to economic thought and less capable of rational calculation than their male counterparts. As historians and anthropologists of gender in modern India have noted, men undoubtedly occupied positions of status and power in Indian families and communities, and could be expected to be "visibly" located in the public sphere; yet, by adopting a more nuanced definition of "power" itself, as well as what it meant to participate in the public sphere in postcolonial India, they have illuminated the varied ways in which Indian women were agentically involved in communal, familial, and economic domains.[147] Here, social scientific claims echoed contemporaneous biomedical discourse. As feminist STS scholars have analyzed, mid-century biomedical researchers routinely justified expert-controlled, long-acting contraceptive technologies like the IUD on the basis of racialized and gendered portrayals of "backward" Third World women who could not be

[147] See Forbes (1996) for how Indian women were vital social, economic, and political participants in modern India.

trusted with user-controlled contraceptives requiring mathematical calculation and timely tracking, like the oral pill (Dugdale 2000; Marks 2001; Takeshita 2011).

It did not take long for Raina to take seriously the claim that men held the key to national population reduction. This time partnering with the Ford Foundation, Raina and the newly convened CFPI designed a condom marketing study in rural areas of the Meerut district in the state of Uttar Pradesh in 1966. The study sought to establish whether and how persuasive mass media and information on contraception and family size influenced men's attitudes towards condoms and their decisions to purchase them. Importantly, the study drew on the theory of opinion leadership to assess whether male political and commercial leaders could help publicize condoms through interpersonal communication and persuasion, whereby mass communicated information was expected to pass from highly-networked and trusted men in political and commercial networks to others in the same networks. The study sought the participation of political leaders known as "pradhans" in local governing bodies known as "panchayats," which were nearly always composed of men during the 1960s and 1970s, as well as pharmacists and storeowners in the district's commercial sphere. Reporting on the study, Raina and his Foundation colleagues Robert Blake and Eugene Weiss (1967) remarked that male networks of communication had successfully promoted condom knowledge and sales, suggesting that family planning publicity efforts should capitalize on such networks.

Tellingly, however, no women were interviewed for their attitudes and beliefs regarding contraception or for whether potential exposure to the experiment's mass media interventions had changed these attitudes or beliefs. Likewise, women-oriented networks of communication were ignored. This indicated that the survey and interview instruments Raina and his Ford collaborators used to determine how mass communication had shaped contraceptive acceptability

and adoption were exclusively male-oriented. Furthermore, while the study also investigated the influence of mass-communicated information about the Lippes Loop IUD prototype, only men were interviewed about their reactions to it and willingness to entertain its use among their wives. Women, the ostensible "prospective users" of the IUD in India were not understood as such—on the contrary, their use of the technology was understood as mediated by their male partners. Eventually, the Meerut study and its gendered conclusions about male communication networks, opinion leadership, and decision-making would eventually form the basis for the nation-wide Nirodh Condom Marketing Program, which I analyze in the next section.

These early studies on vasectomies and condom promotion led to the mushrooming of several research projects in the mid-1960s and 1970s on the utilization of mass communication to modify Indian men's reproductive practices (Kumar 1973; Poffenberger 1968). A number of these projects operated as quasi-experimental studies at the intersection of research and government policy, at both the national and state levels. In time, men's reproductive behavior would consume family planning communications researchers working in India, buoyed by the idea that Indian men's roles as familial decision-makers and community opinion leaders rendered them particularly suitable targets for behavioral modification. Some of this work would attempt to generalize beyond the case of India: as Oudshoorn has analyzed in her study of the development of male hormonal contraceptives in the 1960s and 1970s, social scientific journals on family planning began to devote significantly more attention to men during that time period (Oudshoorn 2003).

5.3. Crafting Companionate Husbands as a Conduit to Contraceptive Adoption

While it was one challenge to cast reproduction as a cognitive phenomenon that would benefit from men's calculative scrutiny, it was another test altogether to enable men to *practice* making new reproductive decisions with their wives. As Chapter 3 analyzed earlier, in communication scientists' view, the "traditional" joint or extended family in India operated as an attitudinal impediment to calculated contraception.[148] Specifically, scientists attempted to delineate how communicative practices within the joint family upheld "fatalistic" outlooks on reproduction, including an apparent desire for many children, views that children were acts of god, and beliefs that conception was seldom manipulable. Social scientists' wariness of reproductive fatalism persisted throughout the 1960s and 1970s despite the widespread knowledge that contraception and birth planning had been variably practiced in India for decades (Ahluwahlia 2008). According to them, the joint family—in which husbands primarily made decisions with other men and older women instead of their wives—might crucially sustain the intergenerational transmission of such outlooks on reproduction (Davis 1955b; Rogers 1973; van den Ban 1967). Bemoaning these attitudes, communication scientists suggested that an effective family planning program required undoing the transmission of reproductive fatalism. Indeed, the joint family often appeared in family planning communications publications as an enduring symbol of Indian tradition, adverse to governmental agendas to popularize the "small family norm" (Jain 1973).

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[148] In India, a "joint family" (or "extended family") is a longstanding familial structure in which two or more "husband-wife pairs" live in the same residential space or in close proximity to each other, in which the husbands are patrilinearly related, and in which familial decisions are made jointly among immediate and extended family members (Khatri 1972). The definition of the joint family is also predicated on property rights and the legal recognition of those rights, whereby there exists the assumption of common property ownership among male members of the family structure and the expectation that property will be divided among them upon the death of the patriarch (Conklin 1974).

In scientists' view, however, men's positions of decision-making power in the joint family made them primary catalysts for unraveling these dynamics and a primary reason to center family planning communication programs on husbands. Nowhere was this view more pronounced than in research and scholarly debates on "husband-wife communication" as a significant moderating variable for contraceptive use. Husband-wife communication was defined as the extent to which husbands and wives communicated amongst themselves on various matters; in the case of family planning, it was defined in relation to communication on reproductive and sexual issues. Assessing the status of interspousal communication among Indian families would come to preoccupy American and Indian family planning communications experts, demographers, and family sociologists during the 1960s and 1970s, who drew on Kingsley Davis's and J. Mayone Stycos's arguments about traditional communication patterns in extended families (Burch and Gendell 1970; Davis 1955b; Davis and Blake 1956; Goode 1963, 1968; Lorimer 1954; Mukherjee 1975; Poffenberger 1968; Poffenberger and Poffenberger 1973). Several would devote their research to establishing the relationship between interspousal communication and contraceptive adoption, which would further legitimize "action research" on the influence of nuclear family imagery and birth control-related mass media on the propensity of couples—and especially husbands—to initiate such communication.

In order to study husband-wife communication, researchers began to include questions in KAP surveys on the extent to which Indian spouses sought each other's counsel on conception and contraception, as well as whether they communicated to a greater degree with extended family members about those issues (Burch and Gendell 1970; Freedman 1961; Khan and Prasad 1985). Analyses of these KAP surveys often singled out two aspects of extended family structures that scientists believed were antithetical to contraceptive adoption: the prevalence of

intergenerational communication among husbands with other men and older women in the family setting and the apparent segregation of husbands and wives of childbearing age from each other. According to Thomas Poffenberger, an American social scientist funded by the Ford Foundation and working in close contact with the CFPI, effective husband-wife communication on contraception would therefore "seldom take place" in the traditional Indian joint family structure, which could "present a major obstacle to effective family planning" (1968:761).

Scientists like Poffenberger concluded that shaping Indian men's beliefs around familial decision-making would eventually lead family patriarchs to adopt a "companionate" definition of the spousal role that typified the ideal Euro-American nuclear family, in which the marital couple formed the nucleus of family dynamics and husbands and wives shared certain conjugal decisions. Lamenting joint family dynamics as encouraging husbands and wives to live "parallel" to each other, researchers argued that companionate marriage, instead, would lead to calculated decisions to use contraception and fewer unplanned pregnancies (Mukherjee 1975; Poffenberger 1968).

Communication scientists' recommendations to policymakers, therefore, often zeroed in on using mass communications to persuade men to develop favorable attitudes towards the nuclear family. According to Bogue, "a goal of the family planning program should be to promote the ideal of companionate marriage and much communication and education in this direction should be undertaken" (1964:7). Echoing Bogue, Indian family planning communications researcher Bishwa Nath Mukherjee suggested using mass educational efforts that reached "a sizeable number of male adults… through *Baithak* or *Chaupal* in many villages…through coffee houses in the cities… [and at] trade centers and markets areas" (1975:663) in order to encourage groups of men to agree on the superiority of companionate

marriage and how "the problem of fertility control applies equally to both husband and wife" (1975:664). He went on to recommend publicity strategies that promoted "the extent to which couples discuss goals about family size as well as the means of achieving these goals…[and] the social and psychological benefits of increased husband and wife companionship expressed in their sharing of different ideas with each other" (1975:666), concluding that such strategies could powerfully spur contraceptive use.

The implicit faith in husband-wife communication as the key to contraceptive use reveals that communications researchers did not view population control on a purely instrumental level; indeed, many shared deep convictions in the organizational superiority of the nuclear family and the companionate husband to which it was oriented. More broadly, they believed that intervening in gendered, familial relations was elemental to any modernization agenda. Families headed by a breadwinning patriarch, removed from the decision-making power of in-laws and driven by an "interactional" rather than parallel style of companionship, were by researchers' definitions the most "effective" familial units (Mukherjee 1975; Hill, Stycos, and Back 1959). It did not matter that this family structure was historically particular to European and Euro-American social life; it was assumed to be the modern apotheosis of family organization, insofar as the West was coterminous with modernity and the purpose of any family was "effectiveness." If mass communications could motivate "traditional" and "ineffective" Indian families to reengineer themselves in this image, scientists averred, they would become self-surveilling units that viewed childbearing as the culmination of rational decisions for the good of family and society. It was a reformed Indian masculinity that appeared to be most reliable pathway towards a reformed Indian family and, eventually, a self-sustaining national economy.

5.4. Motivating Men: The Rise of Mass Communications Campaigns on Condoms and Vasectomies

As Chapter 4 showed, India's family planning and population control program changed dramatically in the early and mid-1960s under the influence of family planning communications research. The Planning Commission of India—the central body tasked with envisioning the country's Five Year Plans and allocating funding for key economic and social aims—tripled funding for the Ministry of Health and Family Planning during the Third Five-Year Plan of 1961-1966 (Rao 2004). While the Ministry continued to build and staff birth control clinics, it earmarked a larger proportion of this funding in this Plan for a parallel "information, communication, and education" (IEC) platform, partnering with the Ministry of Information and Broadcasting to create publicity touting birth control and small families. The new "extension" approach was funded generously the Ministry of Health and Family Planning and the Ford Foundation, with the Population Council providing funding for state-led FPCAR activities.[149] Furthermore, the social scientific language of "opinion leadership" became a core justification behind extension efforts among community leaders and government fieldworkers—explicitly termed "motivators"—and the general population (Narain 1968).

Unlike the clinic model of the 1950s, extension efforts were directed prominently at male audiences whom state officials and family planning policymakers presumed to be the primary consumers of mass communicated information and mass media technologies, and more likely to be accessed in the public sphere. State and central ministries of health would ensure that IEC efforts did not merely advertise male contraceptive techniques but also framed contraception

[149] RAC, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reels 2610 and 3351.

from an economic standpoint while attempting to transform men's attitudes towards nuclear families.

Based on Raina's Meerut Study, the nation-wide Nirodh Condom Marketing Program (hereafter, Nirodh Program) was one of the largest applications of family planning communications research in India. It also exemplified this men-oriented outlook on motivational birth control messaging (Jain 1973). The name "Nirodh" was derived from the word for "prevention" in Sanskrit and came to be synonymous with condoms in India for many decades.[150] The program was jointly conceived in the middle of the 1960s by the Ford Foundation, CFPI, Indian and American advertising agencies, consumer product companies, the Indian Ministry of Health and Family Planning, and the Indian Ministry of Information and Broadcasting in consultation with Indian and American communication scientists.[151] For the first four years of the program, the Ministry of Health and Family Planning distributed imported condoms from the U.S., Sweden, and Japan; however, in the 1960s, two Indian latex production factories—the privately owned London Rubber Company in the city of Madras (now officially known as Chennai) and the publicly-owned Hindustan Latex Limited (HLL) in the city of

[150] "Barrier Methods," *Population Reports,* Series H, Number 1, December 1973, Department of Medical and Public Affairs, The George Washington University Medical Center.

[151] Letter from Raymond Belskey to D.R. Gupta, January 15, 1969, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 2, Box 87, Folder 829; Letter from Hans Krusa to Lyle Saunders, May 31, 1969, RAC, FA678, Ford Foundation Records, Population Program, Office Files of Tim Rice, Series I, Box 3, Folder "India -- Population and Family Planning -- Correspondence, Memoranda, Reports (1/4), 1969-1976"; Memo from Ensminger to Berelson, Freedman, Freymann, and Philip Hauser, January 31, 1969, RAC, FA678, Ford Foundation Records, Population Program, Office Files of Tim Rice, Series I, Box 4, Folder: "India -- Staff and Consultants Papers Re: Population and Family Planning (7/7), 1963-1974."

Trivandrum (now officially known as Thiruvananthapuram)—began producing condoms with significant government funding from the Ministry of Health.[152]

The Nirodh Program was not only floated as a coordinated attempt to popularize contraception but also as a way to collectively persuade the country's male population that a simple technological device would assist them in safeguarding their family's economic security. As Anrudh Jain, an Indian researcher and staff associate affiliated with the Population Council's local network in New Delhi, stated: "The main objective of the Nirodh Program [was] to motivate and persuade *married men* to buy and use Nirodh for planning their families."[153] Built on theories of diffusion and male opinion leadership, the program flooded rural and urban India with mass media advertisements on the government-manufactured condom brand and conscripted men in the public sphere—including pharmacists, storeowners, and local political leaders—to personally communicate favorable information on condoms.

Much as it spearheaded the Integrated Family Planning Program and the Intensive District Scheme, the Ford Foundation's Delhi office took the lead in bringing together various organizations and actors that it deemed important to the success of the program. The

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[152] Letter from Ensminger to Govind Narain, September 5, 1967, RAC, FA678, Ford Foundation Records, Population Program, Office Files of Tim Rice, Series I, Box 3, Folder: "India -- Ford Foundation -- Condoms -- Consultants on Manufacturing and Studies Re: Other Forms of Contraception, 1967"; Letter from T.L. Shankar to Banwari Lall, September 6, 1973, "Proposal for setting up three additional units of 72 million pieces condoms per annum each by Hindustan Latex Ltd.," File Ref. no.: PAD/1-87/73, Planning Commission Archives, National Archives of India (hereafter, NAI). For an extended discussion of Swedish developmental assistance and Scandinavian aid more generally to the Indian population control program, see Sunniva Engh (2006).

[153] Anrudh K. Jain, "Importance of Marketing Research," June 1972, Nehru Memorial Museum and Library (hereafter, NMML), Asok Mitra Papers, Series V, File No. 387.

Foundation's involvement in the program, under Ensminger's direction, had such an indelible impact on the nature of the program that a journalist covering the program went so far as to call Nirodh the "Ford Condom."[154] Ensminger and the Foundation's Delhi office pushed to make the program a joint effort between the government and private industry in line with social scientific arguments to make use of commercial networks to reach male audiences.[155] As a result, the program enjoined six of the largest Indian consumer goods companies at the time to include the condom packets in their product packaging, including companies manufacturing some of the most commonly purchased items in rural and urban India, such as tea, tobacco, and other household products. This was intended to not only help the government defray the costs of distribution but also, and perhaps more crucially, to enable condoms to enter households even if male consumers did not proactively purchase them. In line with the commercially oriented approach that the Foundation was pushing, its U.S. leadership sought the counsel of leading American advertising agency McCann-Erickson and its longtime chairman Emerson Foote to help conceive of the program. Indeed, Foote believed that "Madison Avenue [marketing] techniques… would be more effective" than the purely public health approach that had been taken since the advent of the extension approach in the country's Third Five-Year Plan; the Foundation would later describe the program as drawing on the new field of "social marketing"

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[154] Zalin Grant, "The Ford Condom in India's Future," September 6, 1969, *The New Republic*, RAC, FA678, Ford Foundation Records, Population Program, Office Files of Tim Rice, Series I, Box 3, Folder: "India -- Population and Family Planning -- Correspondence, Memoranda, Reports (2/4), 1969-1976."

[155] Peter King, "Comments on Proposals for Family Planning Promotion: A Marketing Plan," March 1968, RAC, FA739B, Ford Foundation Records, Catalogued Reports (Reports 3255-6261), Box 177, Report 003862.

research, which aimed at applying theories of mass communication and media developed in commercial arenas to otherwise non-commercial, policy-relevant issues for the public good (Jain 1973).[156]

In addition to the social marketing of Nirodh through the private sector, and although the program had made access to free condoms available through family planning clinics and public health channels in a "Free Distribution Scheme," it also made use of government workers in various bureaucratic agencies—in particular, postal workers—to store and sell heavily subsidized condoms in their places of employment.[157] Known as the "Depot Holder Scheme," this particular mechanism sought to capture urban markets under the view that attaching a nominal price to the technology would increase its sense of value—and, thus, its use—among urban male populations with greater monetary resources. More important, male government workers were viewed as potential opinion leaders in their own right that were well-placed in public social networks, enjoyed a certain degree of trust in local communities, and could, therefore, be expected to influence public opinion on contraception.

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[156] Zalin Grant, "The Ford Condom in India's Future," September 6, 1969, *The New Republic,* RAC, FA678, Ford Foundation Records, Population Program, Office Files of Tim Rice, Series I, Box 3, Folder: "India -- Population and Family Planning -- Correspondence, Memoranda, Reports (2/4), 1969-1976."

[157] Memo, C. Stephen Baldwin, October 1, 1969, RAC, FA678, Ford Foundation Records, Population Program, Office Files of Tim Rice, Series I, Box 3, Folder: "India -- Population and Family Planning -- Correspondence, Memoranda, Reports (2/4), 1969-1976; Lyle Saunders, "Excerpts from Agenda papers of the Fourth Meeting, Central Family Planning Council of India," October 6-7, 1967, RAC, FA678, Ford Foundation Records, Population Program, Office Files of Tim Rice, Series I, Box 3,Folder: India: Excerpts from Agenda papers of the Fourth Meeting, Central Family Planning Council of India, 1967.

Beyond popularizing condoms for the purposes of increasing their sales and usage, Nirodh advertisements aimed to fundamentally reframe masculinity, fatherhood, and childbearing in line with communication scientists' claims about nuclear families. For example, a poster that was floated by the Ministry of Information and Broadcasting and publicized for the first two years of the program stated: "Men! The Power to Prevent Birth is in Your Hands!" (Fig. 11).[158] Accompanied by a stern palm showcasing a nuclear family of husband, wife, and two children, the poster persuades men to claim power over family planning and see themselves as an important arbiter of childbearing in this type of family structure. Another popular advertisement from the program depicted a smiling man feeding a young child a glass of what appears to be milk. The statements in Hindi on the advertisement read: "Don't hurry to have another child… THINK a little. First invest in and devote yourself to your existing child. Until you want another, don't have another." (Fig. 12). The poster implies that children are economic investments to be

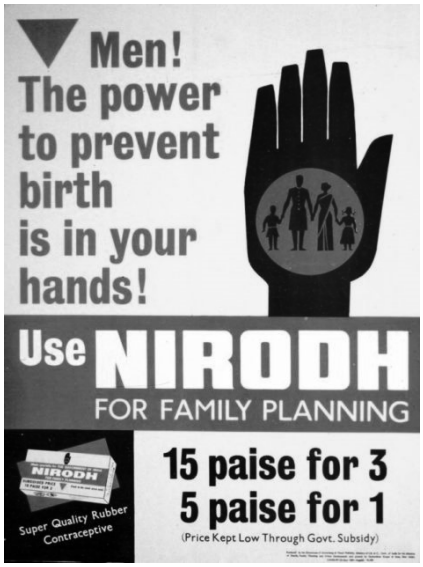

Figure 11. Nirodh condom publicity poster, Indian Ministry of Health, Family Planning, and Urban Development, c. 1969. Source: Images from the History of Medicine Collection, U.S. National Library of Medicine (retrieved February 17, 2017).

[158] Mitra to Narain, May 30, 1968, NMML, Asok Mitra Papers, Series III, File No. 797.

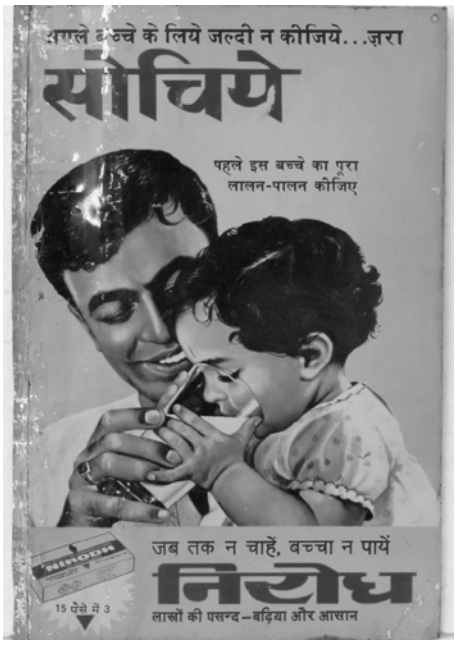

Figure 12. Metal lithographic advertisement for Nirodh condoms, c. 1970s. Source: www.ebay.com (retrieved January 3, 2017).

thought about and cared for. Likewise, they suggest that having a child is something that should be proactively *wanted* and, therefore, planned for. Moreover, the condom is presented as a technology that can enable men to proactively plan childbearing and, in the process, attend to the development of their children.

The new focus on men, aided by researchers affiliated with or funded by the Population Council, was exemplified in the Council's boldest foray into family planning "action" programs around the world in the 1960s: a collaboration with the Walt Disney Studios company to design and produce a short animated film on family planning and overpopulation. The endeavor broke the carefully erected boundaries that the Population Council's leadership had created between its involvement in "basic research" and participation in policy-oriented action programs. In fact,

Berelson believed that collaborating with Disney would get the Population Council the "imprimatur of the world's leading exponent of mass entertainment of wholesome family life attached to and legitimating family planning" as well as the company's "built-in motive to "sell" the film" to a mass market.[159]

Released in 1968, the film featured one of Disney's most famous and recognizable characters, Donald Duck, as a spokesperson for family planning and contraception, and employed a caricatured "Third World man"—the Disney artists' rendering of a "composite" of men from various non-Western regions—as the primary protagonist to whom Donald Duck and an omniscient narrator address themselves (Fig. 13). The man is shown to be married and the rest of the film depicts two possible future scenarios, much like the scenarios Stouffer had suggested years earlier in his first meeting with Notestein and the Population Council's Demographic Division heads: one in which a family has three children, abundant food, and consumer goods, including a radio, and another in which the same family has seven children, not enough to eat, and no recreational or consumer goods to speak of. The film ends with Donald Duck and the narrator explaining to the couple that contraceptive technologies can enable them to limit and space births.

In addition to featuring a man as the primary protagonist of the film's story and intended audience for the narrator's message, several aspects of the film assume that men would be the expected audiences for the film itself. Furthermore, the animations suggest that the message to these intended male audiences was oriented around how family planning was meaningfully

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[159] Memo, "The Disney Project," Bernard Berelson, March 15, 1966, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 517, Folder: "Films – Disney, D-I&S, 1966-1970."

related to economic security through the private accumulation of wealth within a small nuclear family structure. First, the male protagonist is the only character in the family featured in the film to converse with the narrator. His wife is shown to be demure and non-talkative, often

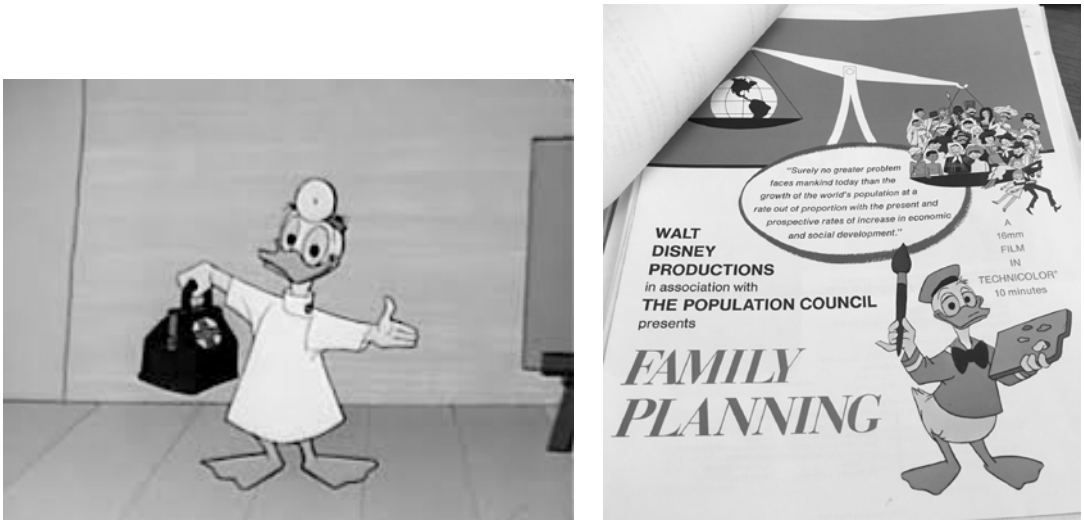

Figure 13. Left: A still from the film "Family Planning" depicting Donald Duck as the film's instructor on family planning. Source: https://www.youtube.com/watch?v=t2DkiceqmzU (Accessed on January 3, 2018). Right: Cover art for a production leaflet and advertisement for the film. Source: RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 518, Folder: "Correspondence – Disney (1968)."

whispering to her husband when she has questions for the narrator, which the husband then relays. Additionally, it is apparent that the narrator's statements, which are directed to the husband, revolve around the economic consequences of childbearing for the family's economic self-sufficiency in both potential scenarios. The husband is the agentic actor in the film, registering shock at the implications of both scenarios while expressing interest in the narrator's advice about contraceptive technologies and birth spacing towards the end of the film. As Figure 14 shows, the scenario depicting the family with fewer children is illustrated with a decidedly "happier" mood. At dinnertime the family's plates are piled high with rice, a radio plays in the background, and the older children are engrossed in toys and books while their mother sews. In

the morning, the children run excitedly to school, while their father tills their plot of farmland until a plentiful harvest appears. On the other hand, the ensuing montage of images depicting the couple in a scenario with seven children paints a grimmer picture of their daily lives (Fig. 14):

Figure 14. Stills from the Disney-Population Council film “Family Planning” (1968). From left to right, top row: A smaller family with educated children and household amenities; The family has enough food to eat. Middle row: A family of seven children with little to eat; an image of “diluted” agricultural wealth in the larger family. Bottom row: image of a satisfied, informed husband at the end of the film; the main character’s wife whispering her question for the narrator to her husband. Source: https://www.youtube.com/watch?v=t2DkiceqmzU (Accessed on January 3, 2018).

the rice in their bowls disappears forebodingly from the frame right before the radio also fades away, while the children grow up to help their father plow the field instead of attending school. The next prominent frame showcases the man's farm being divided into increasingly smaller parts for his adult male children, thereby both splintering the family's already meager wealth into portions that are implied to be incapable of generating further wealth and repeating the cycle of basic survival. Moreover, the husband and wife are the only adults depicted in both scenarios, which serves to reinforce a male-headed, nuclear family structure with no reference to extended families.

The film's message was clear: childbearing has direct, appreciable effects on a family's immediate economic security and well-being, made legible in the terms of food on the table and the ability to purchase non-necessary consumer goods. Its more subtle images, however, implied that a family's purpose is to treat their children like economic investments and their wealth as a heritable, private resource to both be increased exponentially and kept within the confines of the nuclear family. In other words, economic insecurity was not something to be merely staved off but proactively sought after and planned for. In addition, the film painted basic survival as an important but inadequate goal: a family's eventual objective—indeed, a man's primary objective—was to think about economic achievement above and beyond subsistence and be attuned to the ways in which such achievement could be assured. Here, contraception is presented as an important technical means for actively manipulating childbearing and attaining that objective. Although the film was not explicit about *which* contraceptive technologies to consider, the concept of contraception is presented in images showcasing a physician and a government health worker speaking with the couple about their various options. Finally,

women's interest in contraception was, quite literally, filtered through and made sense of by husbands and their presumed economic goals.

The script for "Family Planning" was not originally designed with these messages in mind; rather, the Population Council actively urged an economic angle to be attached to the storyboard. During the production of the film, the Population Council's communications specialists Bernard Berelson, Harry Levin, and Robert Gillespie, who often traveled the span of the country to meet with top Disney artists and executives in charge of the film, complained that the original script did not do justice by the Council's goals to portray contraception as an economic issue; instead, the original script had spent a lot of time emphasizing that loss of sexual virility was not a side-effect of contraception. It was important, Berelson and his colleagues stated, to focus less on audiences' fears about contraception and push the affirmative message that contraception could enable a man to accomplish a degree of "mastery over [his] fate."[160] In their view, since the "problem [they] had to deal with in making the picture" was that "the idea of "planning" is a foreign notion [in countries where] they live for the present only," it was necessary to tie contraceptive use with "the measure of a man's worth and success in life" so that men would "*do something* about limiting the size of their families."[161] As such, the film needed to adequately convey in succinct and graphic terms that "you can plan your family if you want to… and [that], in today's world, *you should want to.*"[162] In response, Disney animator William

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[160] "The Population Picture: Notes Taken at the Meeting, 9/29/66," RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 518, Folder: "Correspondence – Disney, 1966-67."

[161] Ibid.

[162] Ibid.

Bosché and producer Ken Peterson promised Berelson that they would make the necessary changes to reflect those ideas, later stating that the none of Disney's educational films until then had sold as many prints or done "as well" as "Family Planning."[163]

"Family Planning" was eventually translated into over twenty-four different languages, including four Indian languages, for global distribution. In India, the Ford Foundation's Frank Wilder was in charge of securing a translation. The Population Council distributed the film with the collective aid of the central and state government agencies, voluntary organizations such as the FPAI, the Ford Foundation, and private film distributors.[164] In 1969, Council president Berelson successfully convinced the United States Agency for International Development (USAID) to fund the procurement and distribution of the film in India.[165] As Berelson and the other communication experts at the Population Council intended, the film sought to "persuade… legitimize…and re-enforce" the message in India that family planning was the cornerstone of

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[163] Memo, "The Disney Project," Bernard Berelson, March 15, 1966, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 517, Folder: "Films – Disney, D-I&S, 1966-1970"; William Bosché and Ken Peterson, "Tentative Narration and Dialogue for a Film on Family Planning," February 8, 1967, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 518, Folder: "Disney – Story Development Production;" Memo from Levin to Berelson, May 7, 1969, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 518, Folder: "Films – Disney, D-I&S, 1966-1970."

[164] Letter from Ken Peterson to Berelson, July 19, 1966, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 518, Folder: "Correspondence – Disney, 1966-67"; Letter from Harry Levin to Berelson, September 8, 1967, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 518, Folder: "Correspondence – Disney, 1966-67"; Memo from Levin to Berelson, December 28, 1967, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 518, Folder: "Correspondence – Disney, 1966-67": Letter from Dhanvanti Rama Rau to Levin, February 29, 1968, RAC, FA432, Population Council Records, Record Group 2, Accession 2, Series 4, Box 518, Folder: "Correspondence – Disney, 1966-67."

[165] Letter from Berelson to Reimert Ravenholt, October 6, 1967 and April 1, 1968, RAC, FA432, Record Group 2, Accession 2, Series 3, Box 285, Folder 2623.

economic planning in general and a modern masculinity more specifically—"the measure" of man himself.

Theories of mass communication and persuasion also underpinned government-led "mass vasectomy camps"—a new family planning initiative that transformed an otherwise private medical technique into a highly public and theatrical phenomenon of behavioral motivation (Fig. 15).[166] While a handful of states like Kerala, Tamil Nadu, and Gujarat pioneered these camps, by the mid-1970s they would span multiple states with backing from the central government (Rao 2004; Tarlo 2003). Vasectomy camps were festival-like productions that were dedicated primarily to the performing of hundreds and thousands of vasectomies over a short span of time. Some of these camps occurred in and around established family planning clinics while others

Figure 15. Men register for vasectomies at Dujana House Family Planning Clinic, New Delhi. Source: Tarlo (2003).

[166] "Family Planning Newsletter", Family Planning Department of the Indian Chamber of Commerce, February 1968, RAC, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reel 1995; Ashish Bose, "New Directions in India's Family Planning Program," February 5, 1976, NMML, Asok Mitra Papers, Series III, File No. 24.

involved the construction of "mobile" clinics at the commercial and cultural epicenters of villages and urban areas (Fig. 16 and 17). They not only allowed doctors and nurses to perform vasectomies *en masse*, but also boasted of poster exhibitions, song-and-drama routines, and interpersonal persuasion tactics touting the virtues of family planning.[167] Men who had undergone the procedure were sometimes brought in to do this persuasive work. Government fieldworkers would drum up publicity for the camp a few months before it was constructed and would encourage men to attend and interact with previously vasectomized men when the camp was in session (Krishnakumar 1972; Repetto 1968; Thakor and Patel 1972). Those who underwent the procedure were often given rewards as "incentives," including household items and money (Fig. 18). At one such camp in the district of Ernakulam 1970, which was widely regarded as one of the most "successful" in the country, nearly 15,000 men were sterilized over the course of a month.[168]

Thus, mass vasectomy camps did not simply allow medical procedures to be conducted on a large-scale; they were also lauded as preeminent mass communication strategies: prominent family planning communication scientists hailed their motivational and educational components as powerful behavioral techniques that intervened not only in men's bodies, but also in their very philosophies around reproduction and the family. Indeed, researchers like Berelson, Bogue, Freedman, and Rogers considered the camp approach a promising approach to "incentivizing"

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[167] Veena Soni, "The Ernakulam Camps – An Analysis," September 1971, RAC, FA678, Ford Foundation Records, Population Program, Office Files of Tim Rice, Series I, Box 3, Folder: "Vasectomy Camps – Report "The Ernakulam Camps" – Sept. 1971."

[168] Ibid.

family planning, with Bogue terming it the "thinking man's method of family planning" (Berelson 1974; Freedman and Berelson 1976; Rogers 1973).[169] Vasectomy camps were part of a broader move towards sterilization camps more generally; women were also sterilized in camp-like settings even though the incidence of tubectomies in such settings was lower.

At the same time, social scientists suggested proceeding with caution when promoting financial incentives would not blur the lines between "coercion" and "voluntary" acceptance of sterilization (Berelson 1974). Indeed, medical ethicists and reporters noted that in the late 1960s and early 1970s—and especially during the Indian Emergency Period from 1975-1977—sterilization camps were often organized during periods of drought, famine, and the "off"

Figure 16. American Ford Foundation representatives John S. Brennan and Kirk T. Mosley watch a vasectomy in progress at a government sterilization camp in Calcutta, West Bengal in February 1968. Source: "Family Planning Newsletter", Family Planning Department of the Indian Chamber of Commerce, February 1968, RAC, Ford Foundation Records, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reel 1995.

[169] Bogue, "Vasectomy – The Thinking Man's Method of Family Planning," RAC, FA732H, Ford Foundation Records, Grants Them – Tw, The University of Chicago (06600142), Reel 2706; Letter from Bogue to Harkavy, November 12, 1973, RAC, FA732H, Ford Foundation Records, Grants Them – Tw, The University of Chicago (06600142), Reel 2706.

Figure 17. Brennan and Mosley exit a surgical mobile van used in the same camp. Source: "Family Planning Newsletter", Family Planning Department of the Indian Chamber of Commerce, February 1968, RAC, Ford Foundation Records, FA732C, Ford Foundation Records, Grants E-G, Government of India (05900482), Reel 1995.

seasons between harvesting and planting, in which government officials expected men and women to be more willing to "accept" sterilization if offered a financial reward, thereby an indirectly coercive tactic if not. As historian Emma Tarlo (2003) has also documented, mass sterilization camps could often involve government fieldworkers and law enforcement officials forcibly rounding up men to undergo the operation without ascertaining whether they were consenting to them. This often occurred under the threat of force, irrespective of the men's age, marital status, or whether they reported having had their desired number of children.

The coercive targeting of thousands of men to undergo vasectomies, in camps and otherwise, during the Emergency Period eventually cast vasectomy in an unfavorable political light. After 1977, state governments and political parties refocused family planning agendas on female contraception, while government-led mass vasectomy campaigns were almost entirely extinguished (Rao 2004; Tarlo 2003).

Figure 18. Vasectomy “acceptors” receiving household goods, including clarified butter and clocks, at Dujana House in New Delhi. Source: Tarlo (2003).

5.5. Conclusion

Prior scholarship has glossed over the emphasis on men in postwar India’s population control program, with little to no clarification of how and why this emphasis was legitimized or consolidated. By analyzing the workings of gendered knowledge in the Indian case, this study provides this clarification and highlights new approaches for understanding the social control of men’s reproduction. Family planning communication scientists brought distinct scholarly concepts to bear on international family planning prerogatives—including decision-making, attitudes, opinion leadership, and communication—that expanded the focus of this discourse beyond the medical and biomedical vocabulary dominating it at the time. In doing so, communication scientists reframed reproduction as a behavioral phenomenon and cast population control as a matter of managing this behavioral dimension through the strategic use of

mass communications. While twentieth-century medical and biomedical research on the reproductive body reified long-standing notions of femininity, a social scientific focus on reproductive rationality proved fertile grounds for prevailing cultural notions of masculinity, thereby facilitating the framing of men as legitimate targets of reproductive control when such control was cast in similarly cognitive terms.

Future research should complicate assumptions that states will generally refrain from regulating male reproduction and that producers of reproductive knowledge will necessarily maintain an inattention to men. Doing so demands that scholars rethink prior assumptions about gender and reproduction while asking new questions about the conditions under which men become imaginable as legitimate subjects of reproductive surveillance. To quote Almeling and Waggoner (2013:837), "it is more likely… that such questions have simply not been thinkable because of cultural constraints around gender and reproduction."

Nevertheless, the Indian case raises questions about why social scientific claims about men's reproductive subjectivities did not take root elsewhere despite a bevy of contemporaneous studies in Asian, Caribbean, and Latin American regions (Parry 2013). Comparative research is needed to elucidate whether national and regional differences shaped the receptivity that communications research on men's reproductive decision-making encountered across the globe. For example, in Mexico and other Latin American countries, the political dominance of the Catholic Church might have stymied communication scholars' efforts to legitimize mass communications on birth control to begin with, let alone target such communications to men (Gutmann 2007; Oudshoorn 2003). Likewise, comparative research might investigate whether communications experts theorized masculinity and men's decision-making differently in other regions and were subsequently less likely to recommend targeting men in those regions. Taking

the case of Mexico, social scientific and cultural understandings of “machismo” might have prevented communications scholars from positing that the Mexican state could reliably regulate men’s reproduction (Gutmann 2007).

CHAPTER 6

CONCLUSION

This dissertation has examined the relationship between reproductive governance in India and the political and scientific dynamics of the Cold War. It demonstrated how communication scientists in the mid-twentieth century reconceptualized reproduction not only as a biological phenomenon but also as a set of behaviors involving information sharing, communication, and decision-making between men and women—and population control, therefore, as a battle for "hearts and minds." They argued that, when understood as behavior, reproduction, too, could be altered on a large scale by using mass media and mass communications to disseminate information regarding family planning and its presumed virtues. The dissertation also illustrated how international concerns about the purported threat that overpopulation posed to economic development and democratic politics spurred communication scientists to advocate behavioralist approaches to reproduction in the formulation of population control programs. As Indian policymakers and bureaucrats contended with unchecked population growth, American social scientists championed theories that mass communication technologies and strategies could spread persuasive information about family planning, spur changes in reproductive behaviors among India's "masses," and, in turn, bolster national economic development while averting communist uprisings.

The dissertation then demonstrated how transnational encounters among American and Indian experts, Indian policymakers, and wealthy private research donors influenced Indian policymakers to abandon the previous "clinic" approach to family planning policy in favor of an "extension" model. The new model included training programs to transform government fieldworkers and influential community members into family planning "communicators" and

"motivators;" policies to expand radio and satellite television infrastructure; and mass media campaigns extolling nuclear families and contraception. While prior scholarship glosses over these campaigns as mere accompaniments to its medical efforts, this dissertation argues that they represented a radical transformation of reproductive control in response to the exigencies of the Cold War. Specifically, I contend that they reflected American social scientific models of psychosocial management that envisioned behavior control as a means of spurring democratic modernization in the face of communist expansion. Furthermore, I show how this shift in approach transformed a largely medicalized program focused on the bodies of women into a simultaneously ideological endeavor to influence the reproductive decisions of men.

Chapter 2 analyzed American demographers' fears of academic obscurity in a postwar world. It traces how their subsequent foray into population control and family planning research during the Cold War era operated as a signal of their disciplinary relevance to the United States' democratization efforts in decolonizing regions. Chapter 3 demonstrates how a new cadre of "family planning communication scientists" drew on the science of mass communication and public opinion to reframe the global overpopulation crisis as less a biomedical quest for an unassailable contraceptive than a psychological battle for "hearts and minds." In turn, they advocated using persuasive mass communications on the virtues of contraception and nuclear families to influence people's reproductive beliefs and decisions. Chapter 4 illustrated how the Indian state, in response, instituted wide-ranging information infrastructures and various mass communications-based activities for persuading citizens to believe in these virtues. Chapter 5 analyzed the gendered consequences of this shift in approach. Mid-century social scientists' gendered associations of rational decision-making and public opinion formation with masculinity led them to cast Indian men as more appropriate targets of communications intended to influence

such decision-making. As a result, the Indian state aimed these communications largely at men, enjoining them to use condoms, undergo vasectomies, and calculate the benefits of small nuclear families.

This dissertation makes three theoretical and analytical contributions to scholarship at the intersection of sociology of science, gender, and reproductive control. First, it invites scholars to reconsider what counts as reproductive control to begin with. In focusing exclusively on medical and biomedical interventions into reproduction, which have historically tended to target women, sociologists of gender and reproduction have unwittingly reified a gender asymmetry of their own. Broadening the definition of reproductive control to capture regulatory interventions of a cognitive and behavioral nature can account for and explain multiple contemporary and past contexts that have sought to discipline men's relationships to reproduction. Doing so would allow sociologists to account for the distinct conditions under which men have been and can become viewed as subjects of reproductive regulation.

Second, and relatedly, this research spotlights the role of social scientific expertise as a key architect of reproductive regulation, which remains largely uncharted territory in the reproductive control literature. Understanding how social scientists have also attempted to maintain expert jurisdiction over reproductive interventions can open up avenues of inquiry into the distinct ways in which reproductive regulation can take, and has taken, shape. In addition, paying attention to non-medical and non-biomedical sources of reproductive expertise can dispel taken-for-granted conclusions that women will necessarily or always be primary targets for reproductive control.

Finally, this dissertation theorizes how gender and reproductive regulation have been central to global geopolitics. In contrast to sociological explanations of the Cold War as a

primarily military and nuclear impasse between Western and Soviet powers, I argue that the Cold War was also waged through expert-driven interventions into daily gender relations and family institutions in the non-aligned and postcolonial world. In doing so, my research reconceptualizes reproductive control outside of the national framework that has largely guided the scholarship, and makes a methodological case for analyzing the role of transnational actors in global reproductive regulation.

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