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# COLONIAL CONTRACEPTION: AMERICAN BIRTH CONTROL ADVOCATES AND THEIR WORK IN APPALACHIA, PUERTO RICO, AND INDIA; 1930-1970

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DISSERTATION

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A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Arts and Sciences
at the University of Kentucky

By
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ABSTRACT OF DISSERTATION

# COLONIAL CONTRACEPTION: AMERICAN BIRTH CONTROL ADVOCATES AND THEIR WORK IN APPALACHIA, PUERTO RICO, AND INDIA, 1930-1970

By the beginning of the twentieth century, the development of better contraceptives and changing cultural attitudes led to an increased interest in contraceptive research. Although major political, legal, social, religious, and cultural obstacles remained, birth control advocates began to perform clinical trials to identify effective contraceptives and to disseminate contraceptive information. These trials began in the United States, but birth control advocates quickly introduced them into other areas.

In this dissertation, I examine the research efforts of the American birth control movement through an analysis of the activities and discourse of its key advocates and promoters during the middle decades of the twentieth century. These birth control advocates include familiar figures such as Clarence Gamble, Margaret Sanger, Gregory Pincus and John Rock, and less familiar figures such as Edna Rankin McKinnon, Louise Hutchins, and Mary Breckinridge. Through their work as activists, researchers, social scientists, nurses, and physicians, the efforts of these individuals led to a worldwide revolution in birth control. Although this revolution is often portrayed as a victory for women and their reproductive rights, it can also be viewed as a demonstration of western colonial power and its projection throughout the world.

KEYWORDS: Contraception, Colonialism, Appalachia, Puerto Rico, India

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05/06/2022
Date

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## Chapter One: Introduction

The twentieth century saw massive changes in the field of contraception. As the century dawned, no effective contraceptives were routinely available to American women; most forms of birth control that were available were either ineffective or too expensive for routine use. Legal and cultural obstacles inhibited public discussion of birth control, and birth control advocates faced imprisonment and censure if they disseminated contraceptive information to their fellow citizens. By the beginning of the twenty-first century, multiple effective forms of birth control had been created, and they were widely available to women in the United States. Open discussion of the topic was no longer legally restricted, and the use of birth control had become a norm in American culture. In fact, most American women of childbearing age were using some form of contraception, and more than 90% of women had used contraception at some time in their lives.[1] Undoubtedly, in a triumphalist narrative, the last century would be viewed as an era of enormous progress in providing contraceptive options to women throughout the world. The reality is less impressive; despite its wide adoption among American women, contraception remains controversial for a variety of cultural and medical reasons.

[1] K. Daniels, W.D. Mosher, and J. Jones, "Contraceptive Methods Women Have Ever Used: United States, 1982-2010," *National Health Statistics Reports*, no. 62 (2013).

Although the terms *birth control* and *contraception* describe similar objects and processes, there are subtle differences in their definitions. *Birth control* encompasses all methods of birth limitation, including abortion and sterilization. *Contraception,* in the strictest sense, refers to any method of birth control that prevents pregnancy at any point in the process. In common usage, these terms are interchangeable, and I have followed this convention in this dissertation.

Critics from the conservative end of the political spectrum continue to oppose contraception on moral grounds. In 2012, the Affordable Care Act (ACA) was enacted in the United States to reform some aspects of the healthcare system and provide more Americans with affordable medical insurance options. The ACA included many controversial provisions, including a requirement that employers provide medical insurance that made contraceptives available without charge to their insured employees. This requirement was met with vehement opposition from some employers who argued that they were being forced to violate their religious beliefs when they were required to provide this form of insurance. This opposition culminated in a landmark Supreme Court case, *Burwell vs. Hobby Lobby, Inc.* In a 2014 decision, the Supreme Court ruled in favor of the defendants, striking down the contraceptive mandate provision of the ACA. The Hobby Lobby case demonstrated the persistence of determined opposition to the wide availability of contraceptives nearly one hundred years after birth control advocates began studies intended to discover effective contraceptives.[2]

Although much of the contemporary opposition to contraception comes from conservative circles, groups that would normally be supportive continue to express

[2] Adam Liptak, "Court Limits Birth Control Rules," *New York Times,* July 1, 2014.

concerns. Most of these concerns center on issues of medication safety and availability. The history of birth control research is replete with stories about contraceptives that were marketed as safe but later manifested side effects that led critics to question the validity and honesty of the drug approval process. Infamous examples of these contraceptives include deaths associated with the Dalkon Shield IUD in the 1970s, thrombotic complications resulting from the oral contraceptive pill, and increased risk of HIV infection associated with long-acting depot hormone injection.[3] These concerns have often been put forward by feminist groups who favor contraception but have an interest in protecting women from harm associated with contraceptive use.

The continued controversies around birth control point to the importance and persistence of this topic. For many people, birth control is vital to their daily lives and its availability and effectiveness influences fundamental decisions about their intimate lives and family composition. Despite its utility, many others oppose birth control because they view it as a disruption of what they consider the natural function of human reproduction. These viewpoints have powerful antecedents in previous decades when birth control was neither effective nor readily available. An examination of the path taken to bring effective contraception to fruition should also help illuminate the origins and historical background of these current controversies.

This dissertation examines the research efforts of the American birth control movement through an analysis of the activities and discourse of some of its key advocates and activists during the middle decades of the twentieth century. These birth control

[3] Gina Kolata, "The Sad Legacy of the Dalkon Shield," *New York Times,* December 6, 1987; J. Bonnar, "Coagulation Effects of Oral Contraception," *American Journal of Obstetrics and Gynecology* 157, (October 1987):1042-8; Renee Heffron et al., "Use of Hormonal Contraception and Risk of HIV-1 Transmission: A Prospective Cohort Study," *The Lancet Infectious Disease* 12, no. 1 (January 1, 2012): 19-26.

advocates include familiar American figures such as Clarence Gamble, John Rock, and Margaret Sanger, and less familiar international figures such as Louise Hutchins, Edris Rice-Wray, and Lady Dhanvanthi Rama Rau. Through their work as activists, researchers, social scientists, nurses, and physicians, the efforts of these individuals helped to ignite a worldwide revolution in birth control. Although this revolution is often portrayed as a victory for women and their reproductive rights, it can also be viewed as a demonstration of western colonial power and its projection throughout the world.[4]

These birth control advocates, and other similar activists, performed numerous trials of contraceptive methods and techniques in the United States and abroad. In this dissertation, I focused on these efforts to popularize birth control in Appalachia, Puerto Rico, and India. These were culturally, geographically, and historically distinct places, but they possessed one common attribute that bound them together and forms the core of this project.[5] Each of these areas can be categorized as a colonial possession or territory. Appalachia has been described as an internal colony of the United States.[6] Puerto Rico, then as now, exists in a quasi-colonial relationship with the United States. India is the quintessential example of a colonial possession of a western power, in this case, Great Britain instead of the United States. Although these areas are similar in their colonial status, they are different from one another in many other ways. These similarities and

[4] For examples see Angela Y. Davis, *Women, Race, and Class* (New York: Random House, 1981); Janice G. Raymond, *Women as Wombs: Reproductive Technologies and the Battle Over Women's Freedom* (San Francisco: Harper, 1993); Dorothy Roberts, *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty* (New York: Pantheon Books, 1997).

[5] In this study, Appalachia will be defined as the coal producing areas of Kentucky and West Virginia. This geographic limitation encompasses the areas where most of the birth control trials were performed and allows for the application of an "internal colonial" model in my analysis.

[6] Helen Matthews Lewis, Linda Johnson, and Donald Askins eds., *Colonialism in Modern America: The Appalachian Case* (Boone, NC: Appalachian Consortium Press, 1978).

differences provided opportunities for analysis in this project.

This dissertation examines the American birth control movement and its colonial activities between 1930 and 1970. This era was chosen for three reasons. First, this period encompasses the initial Appalachian birth control trials in the 1930s through the creation and widespread adoption of the oral contraceptive pill in the 1960s. Second, including these years in this study allows for an examination of India's transition from a colonial possession to an independent nation in 1947 and that transition's effects on the birth control movement in India. Third, this period covers the productive working years of the individual birth control advocates under consideration.

This project has four larger aims. The first was to craft a narrative history of the birth control movement in select colonial settings. By creating a narrative account, I attempted to elucidate and demonstrate the complicated interactions between western (chiefly American) birth control proponents and the colonial sites where they performed clinical trials. Establishing these ties also allowed me to analyze the motivations and reasons for undertaking these birth control trials.

The creation of a narrative about these trials also served the purposes of memorializing important events and providing a record of the activities of these people. This chronicle will allow other scholars to interpret these events through various theoretical lenses while extending and enriching the narrative I created.

The second goal was to analyze these birth control trials using colonial/postcolonial theoretical constructions. I argue that the choice of these three areas was not accidental but intentional because each of these areas was a colonial possession of a Western imperial power. The colonial nature of these sites accounts for the fact that

contraceptive studies were performed there, but it also accounts for the type of study that was conducted. Often, researchers provided colonial residents with contraceptives that were either ineffective or too dangerous for use among less vulnerable populations. For example, the Puerto Rico trials were conducted using the ineffective spermicidal jelly method instead of the more effective condoms or diaphragms.[7]

The third goal was to recover and reveal the voices of the trial participants. It was difficult to represent these voices accurately and fairly, but it was essential to avoid the pitfall of crafting a narrative of victimization. There is a voluminous literature about the difficulty of representing the subaltern when writing from a position of western privilege.[8] Despite this inherent difficulty, I recognized that it was necessary to present these women's views whenever possible.

The fourth goal was to demonstrate the importance of the interchange of knowledge and information between researchers and participants and between colonial sites and metropolitan centers where the trials were devised and funded. These trials were always contingent on input from residents, and local pressure often resulted in radical changes in the studies. In some instances, trial designers used information obtained in earlier trials to alter the design of later trials. In other cases, researchers ignored lessons from previous trials, often to the detriment of the research effort or participants. Tracing this interaction through different chronologic periods and geographic sites will help to

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[7] Laura Briggs, *Reproducing Empire: Race, Sex, Science, and U.S. Imperialism in Puerto Rico* (Berkeley: University of California Press, 2002), 102-3.

[8] Gyan Prakash, "Subaltern Studies as Postcolonial Criticism," *The American Historical Review* 99, no. 5 (December 1994): 1475-1490; Gayatri Chakravorty Spivak, "Can the Subaltern Speak?" in *Marxism and the Interpretation of Culture,* ed. Lawrence Grossberg and Cary Nelson (Urbana: University of Illinois Press, 1988): 66-111; Robert J.C. Young, *Postcolonialism: An Historical Introduction* (Oxford: Blackwell, 2001).

illustrate the power relations between these groups and the effects these relationships had on the trials and their participants.

## Historiographic Context

In 1935, economist and sociologist Norman Himes wrote *Medical History of Contraception,* the first modern American work of contraceptive history. In this influential work, Himes provided a comprehensive overview of birth control techniques and their application in a global context across the entire span of human history.[9] Despite the implications of the title, Himes placed little emphasis on the medical aspects of contraception; the title was chosen to avoid censorship under the Comstock Laws, which remained in effect until 1937.

Hines demonstrated the universality of the desire for contraception. He argued that "the desire for, as distinct from the achievement of, reliable contraception has been characteristic of many societies widely removed in time and place. Moreover, this desire for controlled reproduction characterizes even those societies dominated by mores and religious codes demanding that people 'increase and multiply'."[10] Because he wrote in an era of profound discord about contraception, Himes' work is notable because he demonstrated the comprehensive nature of the desire for effective contraception and placed the contemporaneous birth control debate in a larger historical context.[11]

Angus McClaren published the subsequent comprehensive history of

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[9] Norman E. Himes, *Medical History of Contraception* (1936; repr., New York: Gamut Press, 1963).

[10] Ibid., xxxiv.

[11] Ibid., xxxv.

contraception in 1992. In this work, *A History of Contraception: From Antiquity to the Present Day,* he presented a much different view of contraception because he wrote in a very different historiographic climate. McLaren agreed that humans have always attempted to regulate their fertility despite the lack of effective contraceptive methods. In this argument, he disputed the traditional wisdom of the earlier twentieth century that claimed that interest in contraception was a new phenomenon born from the propaganda efforts of birth control activists. [12]

McLaren expanded the discussion by focusing on the importance of women, throughout history, in making reproductive decisions and argued that women have always placed more emphasis on reproductive decisions than men did. He further claimed that the contested nature of fertility control was universal across all the societies he studied. Despite their agreement on many significant points, McLaren criticized Himes for propagandizing birth control without exploring the possible adverse effects of birth control on both women's freedom and family relationships.[13]

The most recent global history of contraception was published by Robert Jutte, a German historian. In this work, Jutte promised to provide a postmodern analysis of contraception employing the Foucauldian concept of "the relationship between power and knowledge."[14] Although this promised analytic framework is largely absent from his book, Jutte provided an updated overview of the history of contraception, emphasizing European practices and techniques.

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[12] Angus McLaren, *A History of Contraception: From Antiquity to the Present Day* (Oxford: Basil Blackwell, 1990).

[13] Ibid., 4-5.

[14] Robert Jutte, *Contraception: A History,* trans. Vicky Russell (Malden, MA: Polity Press, 2008).

David Kennedy initiated the modern era of American birth control scholarship with the publication of his seminal monograph, *Birth Control in America: The Career of Margaret Sanger,* in 1970. Kennedy examined the history of the American birth control movement through the life and career of Margaret Sanger. Kennedy crafted a negative portrayal of Sanger that focused on her supposed megalomania and overly emotional approach to her work. He also criticized her for her trenchant anti-Catholic stance and her involvement with the eugenics movement, arguing that these positions proved detrimental to the future success of the birth control movement.[15]

Although Sanger is frequently depicted as a feminist icon, Kennedy portrayed her in a very different light. He claimed that her goal for birth control was not for women to reach parity with men but to obtain power over men. Sanger, Kennedy asserted, supported birth control not because it liberated women but because "it strengthened women for their combative role…in the battle of the sexes." Her importance to women rested not in recognizing her accomplishments in the birth control movement but in her symbolic redemptory role in soothing America's conscience over the "continuing victimization of women."[16] Kennedy's conclusions foreshadowed future scholarship about Sanger and the birth control movement and the controversies around her legacy.

In 1978, James Reed published *The Birth Control Movement and American Society: From Private Vice to Public Virtue.* In this work, Reed appraised the birth control movement by examining three of its most influential proponents; Margaret

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[15] David M. Kennedy, *Birth Control in America: The Career of Margaret Sanger* (New Haven: Yale University Press, 1970), 273-5.

[16] Ibid., 275-6.

Sanger, Clarence Gamble, and Robert Latou Dickinson. He argued that the birth control methods available in the nineteenth century were relatively effective. Their adoption and use led to a lowering of the birth rate in the United States. Reed maintained that social values such as religious opposition, resistance to feminist ideology, and concern over differential fertility between immigrants and native-born Americans hampered the birth control movement more than the lack of progress in contraceptive technology.[17]

Although Reed examined other birth control advocates, his treatment of Sanger formed the centerpiece of his analysis. He viewed Sanger as a crusading pioneer and argued that she "had a greater impact on the world than any other American woman." In contrast to Kennedy, Reed presented a sympathetic assessment of Sanger's life and career. Instead of criticizing her for her involvement with the eugenics movement and alliances with professional elites, Reed argued that these maneuvers were tactically necessary for Sanger to advance her movement, given the social and cultural milieu in which she operated.[18]

Reed's inclusion of other birth control pioneers in his work allowed him to consider their importance in creating the modern birth control movement and to place Sanger's contributions in a larger context. Reed brought Gamble and Dickinson into the discussion and examined the roles played by these male physicians. Dickinson was a physician and sexologist who worried that traditional family life was declining in America. He promoted birth control as a mechanism to strengthen traditional marriage as he lobbied physicians to provide contraceptive services to their patients. Dickinson

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[17] James Reed, *The Birth Control Movement and American Society: From Private Vice to Public Virtue,* rev.ed. (Princeton: Princeton University Press, 1983).

[18] Ibid., 67.

advocated for medical control over contraception, both as a necessary service to patients and a potentially profitable medical endeavor.[19]

Clarence Gamble approached the birth control issue from a different vantage point than either Sanger or Dickinson. He supported birth control research because he feared that the supposedly superior fertility of poor people would demographically overwhelm "hard-working" Americans and lead to the imposition of a welfare state. Although he was a physician, Gamble's fear of demographic annihilation led him to support the widespread public provision of contraceptives and oppose medical control over their availability. Despite their philosophical differences, Reed demonstrated ongoing cooperation between Sanger, Dickinson, and Gamble that allowed them to propel the birth control movement forward despite their disagreements.[20]

The United States underwent profound social, cultural, and political changes in the 1960s and 1970s. Contemporary historical scholarship reflected these changes as historians adopted new methods and female and minority historians became more prominent. Exemplifying many of these changes, Linda Gordon published *Woman's Body, Woman's Right: Birth Control in America* in 1976.[21] In this controversial work, Gordon analyzed the political conflicts over birth control and portrayed contraception as a vital issue for women. Although she included the early history of contraception in her work, she concentrated on the late nineteenth and early twentieth-century American birth control movement. Eschewing the social history approach favored by Reed, Gordon

[19] Ibid., xi, 176.

[20] Ibid., i-xii.

[21] Linda Gordon, *The Moral Property of Women: A History of Birth Control in America*, Rev. ed. (Urbana: University of Illinois Press, 2002). The 2002 edition is a revised and updated edition of *Woman's Body, Woman's Right: Birth Control in America* (New York: Grossman / Viking, 1976).

shaped a socialist, feminist critique of the birth control movement and its leaders.

Gordon argued that the impetus for the modern birth control movement occurred as women began to challenge the strictures of the Victorian ideal of the "cult of motherhood."[22] Early feminists embraced this idea because it allowed them to achieve some freedom without directly challenging the dominant social order. Concerns about race suicide and decreasing fertility among native-born whites challenged this ideology and led to a reconsideration of the role of mothers and motherhood in American society. These new concerns commodified reproduction, dethroned the "cult of motherhood," and transformed a woman's role into a biological duty to breed future citizens.[23]

Women increasingly sought work outside the home, and these women began a groundswell for effective birth control as sexual activity and marital security became separated in their lives. Gordon claimed that the demands of this new capitalist economy led to an alliance between middle-class women and working-class women around the issue of birth control. The Socialist Party and the Industrial Workers of the World provided professional organizers that allowed Margaret Sanger (and others) to disseminate their message widely. By 1910, the social and sexual revolutions appeared to be inseparable.[24]

Unfortunately for the birth control movement, The First World War intervened, and the organized left came under attack in the United States. The birth control movement had provided a linkage between socialism and feminism, but this dissolved as Sanger turned to liberal reformers for support. Gordon was particularly critical of

[22] Ibid., xii.

[23] Ibid., 68-71.

[24] Ibid., 125-68.

Sanger's actions at this juncture, blaming her for the movement's turn away from working-class women to a male-dominated movement.[25]

Gordon also criticized Sanger for her role in the continuing professionalization of birth control and her willingness to cede control over contraception to the medical establishment. Male physicians assumed control over birth control research, and women played increasingly minor roles in the movement. Gordon argued that Sanger's willingness to work with male medical professionals betrayed the movement's feminist and radical underpinnings and increasingly divorced the issue of birth control from the broader women's rights movement.[26]

A historiographic controversy arose following the publication of Reed's *The Birth Control Movement and American Society* in 1978. Feminist scholars excoriated Reed for his sympathetic portrayal of Margaret Sanger. They accused him of a lack of "feminist consciousness" and for relegating "women to a passive role in the making of their own, most intimate, history."[27] They further criticized Reed for his treatment of the poor "as *being* a problem rather than *having* problems because he does not probe too deeply into the way the social order generates poverty along with affluence."[28] These scholars preferred Gordon's methodology and focus on the class and gender aspects of the birth control movement, along with her socialist analysis and attacks on capitalism as the true

[25] Ibid., 171-200.

[26] Ibid., 200-1.

[27] Elizabeth Fee and Michael Wallace, "The History and Politics of Birth Control: A Review Essay," *Feminist Studies* 5, no. 1 (Spring 1979): 208.

[28] Ibid., 212.

evils behind women's oppression.[29]

Reed answered his critics in the preface to a later edition of his book. He asserted that Gordon "treated the activities of a large number of organizations and individuals…as one vast conspiracy in the service of political repression and American imperialism." He accused her of ignoring the "considerable differences in ideology and strategy between birth controllers…allowing her own ideology to compensate for inadequate research."[30]

In 1992, Ellen Chesler published the first scholarly biography of Sanger, *Woman of Valor: Margaret Sanger and the Birth Control Movement in America.* Chesler had access to sources that were unavailable to Kennedy and Reed, and she used these new sources to examine Sanger's entire life and career. In Chesler's view, Sanger was a pragmatic realist who sought alliances with the medical community as part of a carefully planned strategy to maximize the influence of the birth control movement. Chesler argued that Sanger was a feminist, and she attempted to place Sanger's actions within the context of her time.[31]

Chesler cited the acceptance of many of Sanger's ideas as a measure of her importance to the birth control movement. Despite her positive portrayal of Sanger, Chesler also criticized her personal and professional shortcomings. She was particularly critical of Sanger's embrace of eugenics and her silence when eugenics advocates proposed contraceptive and sterilization schemes among the poor and racial minorities.

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[29] Ibid., 214.

[30] The revised edition (1983) of *The Birth Control Movement and American Society: From Private Vice to Public Virtue* included a new preface on the relationship between historical scholarship and feminist ideology.

[31] Ellen Chesler, *Woman of Valor: Margaret Sanger and the Birth Control Movement in America,* Rev.ed. (New York: Simon and Schuster, 2007).

This criticism is tempered by Chesler's observation that Sanger was not unusual in her adoption of eugenics because eugenics was a respectable scientific discipline embraced by many intellectuals of that period.[32]

Jean Baker published *Margaret Sanger: A Life of Passion* in 2011. In a sympathetic portrayal, Baker presented Sanger as a pragmatic reformer plagued by powerful political and religious opposition. She argued that Sanger's eugenics views represented the epitome of scientific knowledge at the time and "promoted enlightened parenthood and raising healthy children" coupled with the negative specter of "involuntary sterilization."[33] When dealing with Sanger's oft-criticized racism, Baker argued for a more nuanced view of Sanger that placed her within the context of "the conventional wisdom of her times."[34]

Baker also condemned the feminist critique that condemned Sanger for abandoning feminist principles and medicalizing birth control through her cooperation with medical authorities. In Baker's view, these critics held Sanger to a "paradoxical double standard" that required her to meet the standards of modern feminists while negotiating a path forward for her movement in a very different time and place. Baker did not excuse Sanger's eugenic and racial views but instead argued for a balanced treatment of her life and career that recognized her successes and failures.

Dr. Clarence Gamble, a Boston physician and heir to a portion of the Proctor and Gamble fortune was initially profiled in James Reed's book, published in 1978. In the

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[32] Ibid., 11-18.

[33] Jean Baker, *Margaret Sanger: A Life of Passion* (New York: Hill and Wang, 2011), 5.

[34] Ibid.

same year, Doone and Greer Williams published *Every Child a Wanted Child: Clarence James Gamble M.D. and His Work in the Birth Control Movement.*[35] In this work, the authors portrayed Gamble as a "heroic missionary 'spreading the good news' of family planning" and "a tireless experimentalist in search of a good contraceptive that the poor could afford to use."[36] There is no mention of Gamble's eugenics and population control ideology and little discussion of his advocacy for involuntary sterilization laws in the United States and abroad.

In a 1979 review, James Reed highlighted the problems raised by this book. Because the Gamble family commissioned the publication of *Every Child a Wanted Child*, they maintained editorial control over the final product. The original version of the manuscript did not meet the Gambles' requirements, and they hired an editor to make the necessary changes to address their concerns. This conflict resulted in a book that was "primarily a memorial to a beloved husband and father" that was "short on critical analysis and long on personal details about Gamble and his family."[37] Despite Gamble's controversial career and central role in the birth control movement, there is still no scholarly study of his life and work.

Dr. John Rock, another birth control pioneer, has been the subject of a recent biography that detailed his life story and analyzed his role in the development of the oral

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[35] Doone Williams and Greer Williams, *Every Child a Wanted Child: Clarence James Gamble M.D. and His Work in the Birth Control Movement*, ed., Emily P. Flint (Cambridge: Harvard University Press, 1978).

[36] Ibid., xi.

[37] James Reed, review of *Every Child a Wanted Child: Clarence James Gamble M.D. and His Work in the Birth Control Movement,* by Doone Williams and Greer Williams, *Family Planning Perspectives* 11, no. 2 (March – April 1979): 139.

contraceptive pill. *The Fertility Doctor: John Rock and the Reproductive Revolution* was published in 2008 and is the first scholarly treatment of Rock that made use of the archival evidence.[38] Although the authors styled their work as a biography, they also used Rock's story to trace the development of reproductive medicine in the United States. As this work clarifies, Rock was a complicated character who initially focused on discovering treatments for infertile women. As this research progressed, he envisioned the application of his findings to not only treat infertility but to create an effective hormonal contraceptive.

In the 1960s, Rock was hailed as a "heroic champion of a new and liberating technology" but he came under attack in the 1970s as a "beleaguered defender of a suspect drug."[39] He anticipated attacks from the political right and the Catholic Church, but he was surprised and dismayed as feminist critiques developed.[40] Barbara Seaman and others accused Rock of downplaying the pill's dangerous side effects and misleading clinical trial participants.[41] Marsh and Ronner disputed these findings through a thorough examination of Rock's personal and professional papers. They concluded, "he (Rock) was scrupulous in explaining to patients what the research was and why he was asking them to participate."[42] As with Sanger and early birth control advocates, Rock's legacy

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[38] Margaret Marsh and Wanda Ronner, *The Fertility Doctor: John Rock and the Reproductive Revolution* (Baltimore: Johns Hopkins University Press, 2008).

[39] Ibid., 248.

[40] John Rock, M.D., *The Time Has Come: A Catholic Doctor's Proposal to End the Battle Over Birth Control* (New York: Knopf, 1963).

[41] Gena Corea, *The Hidden Malpractice: How American Medicine Treats Women as Patients and Professionals* (New York: Morrow, 1977); Barbara Ehrenreich, "Bitter Pill," review of *The Pill, John Rock, and the Church* by Loretta McLaughlin, *The New York Times Book Review,* (March 3, 1983) and Barbara Seaman, *The Doctor's Case Against the Pill,* 25th Anniversary edition (Alameda, CA: Hunter House, 1995).

[42] Marsh and Ronner, *The Fertility Doctor,* 290.

remains controversial and open to markedly different interpretations.

The literature on the birth control movement pays little attention to birth control trials or the exportation of these trials beyond the United States. Seminal works by James Reed and Linda Gordon briefly engaged with these issues, but they are not primarily concerned with them.[43] However, a few works examine birth control trials conducted in Appalachia, Puerto Rico, and India.

The scholarship about the birth control movement in Appalachia consists primarily of unpublished dissertations and theses. These studies, however, do not address the questions posed by this study.[44] This paucity of scholarship can be viewed as a liability, but it also presents an opportunity to fill this void.

Three monographs examine the extension of the U.S. birth control movement and its activities to Puerto Rico. Annette de Arellano and Conrad Seipp's *Colonialism, Catholicism, and Contraception* examines the contentious relationship between the Catholic Church and American birth control advocates in promoting contraceptive use in Puerto Rico.[45] Although this work provides a valuable overview of the birth control movement in Puerto Rico, it is limited by its depiction of island women as passive

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[43] Gordon, *The Moral Property of Women*; Reed, *The Birth Control Movement and American Society*.

[44] Deborah Lynn Blackwell, "The Ability 'To Do Much Larger Work': Gender and Reform in Appalachia, 1890-1935" (PhD diss., University of Kentucky, 1998); Melanie Beals Goan, *Mary Breckinridge: The Frontier Nursing Service and Rural Health in Appalachia* (Chapel Hill: University of North Carolina Press, 2008); Heather Harris, "Constructing Colonialism: Medicine, Technology, and the Frontier Nursing Service" (master's thesis, Virginia Polytechnic Institute and State University, 1995); Deborah McRaven, "Birth Control Women: Controlling Reproduction in the South, 1933-1973" (PhD diss., University of Kentucky, 2006); Judith Gay Myers, "A Socio-Historical Analysis of the Kentucky Birth Control Movement: 1933-1943" (PhD diss., University of Kentucky, 2005).

[45] Annette B. Ramirez de Arellano and Conrad Seipp, *Colonialism, Catholicism, and Contraception: A History of Birth Control in Puerto Rico* (Chapel Hill: University of North Carolina Press, 1983).

victims of outside forces.

In 2008 Iris Lopez published *Matters of Choice,* an ethnographic study of Puerto Rican women and their birth control choices.[46] In her analysis, Lopez refused to accept the familiar narrative of victimization in her depiction of reproductive choices made by Puerto Rican women. In refuting this narrative, she argued, "Puerto Rican women's reproductive freedom is a complex matter that can not be described as either completely repressive or entirely free."[47] Her nuanced treatment of the issues of victimization, agency, and reproductive choice provides an interpretive framework for this project.

In *Reproducing Empire: Race, Sex, Science, and U.S. Imperialism in Puerto Rico,* Laura Briggs considered the often-tempestuous relationship between the United States and Puerto Rico through an examination centered on sexuality, reproduction, and gender and how these issues shaped the colonial relationship between the two states. American reformers and government officials attempted to impose American hegemony on the island through interventions aimed at the sexual practices and reproductive habits of the Puerto Rican natives. Briggs argued that American social scientists and medical professionals helped maintain Puerto Rico's colonial status by attempting to control "deviant" sexual practices and encourage contraception among working-class women to thwart a perceived population explosion on the island.[48]

There are two recent monographs examining contraception in India, but neither book focuses on the activities of outside birth control advocates. In *Reproductive*

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[46] Iris Lopez, *Puerto Rican Women's Struggle for Reproductive Freedom* (New Brunswick: Rutgers University Press, 2008).

[47] Ibid., xii.

[48] Briggs, *Reproducing Empire.*

*Restraints,* Sanjam Ahluwalia examined the interactions between the Indian birth control movement and the Indian nationalist movement. The author enriched the analysis by conducting numerous oral history interviews with Indian midwives, which provide valuable insights into the concerns and actions of peasant women in rural northern India.[49]

Sarah Hodges analyzed birth control in south India in *Contraception, Colonialism, and Commerce.* In this work, the author considered the adoption of birth control in south India by examining indigenous birth control movements and their relationships and interactions with outside birth control advocates. Hodges' work focused on the previously unexamined Tamil-speaking areas of south India. It addressed the discourse of overpopulation and the disagreements about this topic between indigenous and western birth control proponents.[50]

## Method and Theory

This dissertation is designed as a work of transnational history. Patricia Clavin, in her seminal essay, *Defining Transnationalism,* argues that there are two reasons that it is difficult to provide a strict definition of transnationalism. First, the concept is continually developing as scholars apply it to different aspects of historical study. Second, the creation of a strict definition could limit the concept and suppress potentially fruitful lines of inquiry. Because this concept is so broad, I think it is important to attempt to define it

[49] Sanjam Ahluwalia, *Reproductive Restraints: Birth Control in India, 1877-1947* (Urbana: University of Illinois Press, 2008).

[50] Sarah Hodges, *Contraception, Colonialism and Commerce: Birth Control in South India, 1920-1940* (Aldershot, UK: Ashgate Publishing, 2008).

for my purposes in this dissertation.[51]

Although the concept of transnational history is somewhat ambiguous, three essential ideas define its meaning. First, transnational history emphasizes the flow of ideas, people, and objects across international borders. Second, the importance of international nongovernmental organizations, such as birth control advocacy groups, can be highlighted and examined using a transnational approach. Governmental organizations played a role in the birth control movement, but they were often absent or limited in effectiveness by political and monetary considerations. Third, transnational history deemphasizes the importance of the nation as a category for historical inquiry.[52]

In addition to its transnational focus, this dissertation will examine direct interactions between local residents and outside birth control advocates. In her monograph, *Imperial Eyes: Travel Writing and Transculturation,* Mary Louise Pratt proposed the idea of "contact zones" as an analytical strategy to analyze these interactions. In Pratt's formulation, the term "contact zones" refers to "the space and time where subjects previously separated by geography and history are co-present, the point at which their trajectories now intersect.[53] The use of the term "contact" invokes the contingent and improvisational nature of colonial encounters and "emphasizes how subjects get constituted in and by their relations to each other."[54] This analytical tool

[51] Patricia Clavin, "Defining Transnationalism," *Contemporary European History* 14, no. 4 (November 2005): 421-39.

[52] Erik van der Vleuten, "Toward a Transnational History of Technology: Meanings, Promises, Pitfalls," *Technology and Culture* 49, no. 4 (October 2008): 978-84.

[53] Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation,* 2nd ed. (New York: Routledge, 2008), 6.

[54] Ibid., 8.

emphasizes the interactions between residents and outsiders while avoiding the temptation to present a narrative of colonial oppression and victimization in this study.

Theoretical constructions from Michel Foucault's work, specifically *The History of Sexuality*, inform the portrayal of the relations between outside birth control advocates and indigenous subjects in this study. By employing Foucault's conception of *biopower* in this analysis, I can show the agency of these women without ignoring the power differential between them and the researchers. [55] This form of analysis is preferable to a simplistic power differential analysis that silences the voices and actions of the trial subjects and does not allow for a nuanced examination of the critical interactions between these two groups.

## Organization

This dissertation is organized both geographically and chronologically. It charts the progress of birth control research by American birth control advocates in Appalachia, Puerto Rico, and India from 1930-1970. Chapter I is an introduction to my topic. Although much of the historiographic analysis is dispersed through the subsequent narrative chapters, the Introduction includes background information and elucidates some historiographic ideas that underpin this work.

Chapter II examines birth control trials performed in Appalachia in the 1930s and 1940s. Analyses of two specific trials, one in Logan, West Virginia, and one in Berea, Kentucky, provide a detailed view of the procedures and methods adopted by American birth control advocates when they performed clinical trials in more remote areas of the

[55] Michel Foucault, *The History of Sexuality: Volume I: An Introduction*, trans. Robert Hurley, (New York: Random House, 1978).

United States. Because these trials represent the original studies in this analysis, it is important to trace how knowledge gained in Appalachia informed the next set of studies in Puerto Rico. The concept of Appalachia as an internal colony is addressed, and the theoretical background for this idea is discussed.

Chapter III analyzes birth control trials performed in Puerto Rico from the 1930s through the 1950s. The planning and organization of these studies benefited from lessons learned in the earlier Appalachian studies. Although researchers tried to apply these lessons in Puerto Rico, they faced different obstacles there, including organized opposition from the Catholic Church and nationalist politicians. Despite their attempts to adapt their techniques to the local situation in response to resistance and feedback from island residents, their position in Puerto Rico remained contentious throughout the entire period.

Chapter IV examines birth control trials conducted by American researchers in India from the 1930s through the 1950s. The complexity of India allows for analysis of issues surrounding colonialism, overpopulation, and cooperation between British and American researchers. The techniques previously employed in Appalachia and Puerto Rico were often directly transferred to Indian studies despite the immense cultural differences between India and the sites of previous studies. Western researchers conducted many of the Indian studies with the assistance of indigenous birth control groups. Still, these examples of cooperation must be balanced against the frequent conflicts that arose between local groups and outside advocates.

Chapter V consists of an Afterword and a Conclusion. The Afterword evaluates oral contraceptive trials in Puerto Rico and Appalachia. These trials are significant for

this study because they demonstrate a return of these researchers to their areas of original interest as they completed successful trials that eventually contributed to the approval of Enovid, the first oral medication approved by the FDA for contraceptive use. This era saw the increasing involvement of large, multinational pharmaceutical companies, further demonstrating the colonial nature of these studies. The advent of contraceptive research performed under the auspices of these large companies presages the current situation in that field. The Conclusion provides a final analysis of this work and an update on the current status of contraceptive research.

## Chapter Two: Appalachia

In the 1920s, the birth control movement in the United States was an urban phenomenon confined primarily to large eastern and midwestern cities. The situation changed in the 1930s as birth control promoters challenged legal restrictions, such as the Comstock Laws, to make birth control information and technology more readily available in rural America. This movement was driven by a conflation of factors, including the onset of the Great Depression and rising poverty, rapid population growth in rural areas, and a eugenics ideology that envisioned technological solutions for perceived social problems. These trends merged in coal-producing regions of Appalachia. They led to the first rural trials of contraceptives in the United States, first in Logan County, West Virginia, followed closely by a second similar trial in Berea, Kentucky.[1]

For contraception researchers, rural areas of West Virginia and Kentucky provided ideal locations for birth control trials because of their high birth rates, limited access to effective forms of contraception, and endemic poverty. In 1930, even as birth rates were decreasing nationwide, they remained "exceedingly high" in Appalachia.[2] The United States National Resources Committee report on regional differences in birth rates

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[1] The contemporary definition of Appalachia is heavily influenced by the expansive geographic boundaries of the region as defined by the Appalachian Regional Commission (ARC). The criteria used by the ARC allows for the inclusion of many counties that would not be considered to be traditionally Appalachian areas, based on cultural and economic factors. For the purposes of this chapter, I have focused on central Appalachia as defined by West Virginia and eastern Kentucky. This choice has been made for pragmatic reasons – the early birth control trials were conducted in these two states and the coal producing counties of southern West Virginia and eastern Kentucky had high birth rates and were economically dependent on coal mining controlled by outside interests. This section of Appalachia represents the core of the region and provides a subregional microcosm to study the historical forces of internal colonialism and its effect on the availability of contraceptive services in this region.

[2] United States National Resources Committee, *The Problems of a Changing Population*, Washington, D.C., Government Printing Office, 1938. Quoted in Gilbert W. Beebe, *Contraception and Fertility in the Southern Appalachians* (Baltimore: The Williams and Wilkins Company, 1942), 19.

claimed:

> The highest fertility in the United States is found among the women of the southern Appalachians. If there were no emigration, the population of the counties of southern West Virginia, southwestern Virginia, western North Carolina, eastern Kentucky, and eastern Tennessee would double within one generation.[3]

From the vantage point of outside contraceptive advocates, central Appalachia offered a unique opportunity to test their ideas on a population seemingly in desperate need of their services.[4]

Despite the stereotypical representations of Appalachia as a remote, isolated region detached from the mainstream of American society, Appalachian women showed considerable interest in contraception. Undeterred by the expense, legal risk, and relative unavailability of effective contraceptives, 50 percent of white married women and 33 percent of black married women were using some form of contraception in Logan County, West Virginia in the early 1930s. These numbers compared favorably with previous studies of similar rural groups. This study also noted less frequent contraceptive use among the wives of coal miners compared to other local women. The author argued that the trend toward increased use of contraception "is being led by women closest to modern urban ways of life," and that "the size of family which southern Appalachian women will tolerate is probably well above that desired by typical urban residents of low social and economic status."[5] In these statements, he pointed out the perceived superiority of the urban and modern over the rural and traditional in the minds of contraception

[3] Ibid., 18.

[4] Central Appalachia, according to the ARC, encompasses counties in eastern Kentucky, southern West Virginia, northeastern Tennessee, and southwestern Virginia. "Subregions in Appalachia," Appalachian Regional Commission, accessed June 28, 2015, http:// http://www.arc.gov/research/MapsofAppalachia.asp.

[5] Beebe, *Contraception and Fertility in the Southern Appalachians,* 95-6.

advocates and their lack of respect for reproductive choices made by Appalachian women.

Specific cultural characteristics, presumed to be endemic in the local population, troubled some observers. Malcolm Ross was a Quaker missionary who traveled throughout eastern Kentucky and West Virginia in the early 1930s to survey economic and social conditions in the coalfields. During his research in the region, Ross documented the resistance to birth control in Appalachian coal mining communities. Childbearing, Ross argued, was the only form of expression available to young women in this region who "need something to be proud about, so numbers, since they are inevitable, mark the rating of a successful mother. Production of an uncombed and half-naked brood is the mine wife's main chance for self-expression."[6] Although Ross appreciated a definite need for birth control, he despaired of the possibility of its success because "a fight for birth control in the mountains would have a moralist thundering from every pulpit." He feared that "no move to limit the size of families succeeds under the rabbit warren standard of living" he witnessed during his travels through the Appalachian coalfields.[7]

Appalachia undoubtedly had a high birthrate compared to national norms, but the idea of Appalachia as an area of rampant reproduction is also found in earlier scholarship. In 1913, Horace Kephart described the plight of Appalachian women stating, "Mountain women marry early, many of them at fourteen or fifteen…. Large families are the rule, seven to ten children being considered normal, and fifteen is not an uncommon

[6] Malcolm Ross, *Machine Age in the Hills* (1933; repr., Miami: Hardpress Publishing, 2006), 135.

[7] Ibid.

number…."[8] This claim was echoed by John C. Campbell, who quoted a local mother's belief that it "seems like a body ought to have at least twelve."[9] These observers recognized the difficulties these women faced, but neither advocated contraception as a mechanism to improve their lot.

Widespread contraceptive use among residents suggests the desire to limit family size among Appalachian women, but interviews with women from Kentucky coal mining communities demonstrate that available materials and knowledge were woefully inadequate. One interviewee, Della Smith, married at age fifteen and had eighteen total pregnancies resulting in four miscarriages and fourteen live births. Discussing birth control options, Smith claimed, "there wasn't no such thing as birth control" and complained about the lack of contraceptive information available at the time of her marriage.[10] Another interviewee, Ida Croley, also had fourteen children. Croley humorously lamented the lack of effective contraception when she stated, "they didn't have no birth control pills and things back then, I told if I heared of them back then I would of stole some."[11] Other women spoke of resorting to ineffective folk remedies, including petroleum jelly and standing and jumping about immediately after intercourse

[8] Horace Kephart, *Our Southern Highlanders*, Rev. ed. (1922; repr., London: Forgotten Books, 2010), 332.

[9] John C. Campbell, The *Southern Highlander and His Homeland,* Rev. ed. (1921; repr., Lexington: University Press of Kentucky, 1969), 138.

[10] Della Smith, interview by Joie Carroll and Marian Colette, 1988, Patterns in Parenting Oral History Collection, Kentucky Historical Society Library, Frankfort, KY.

[11] Ida Croley, interview by Joie Carroll, 1988, Patterns in Parenting Oral History Collection, Kentucky Historical Society Library, Frankfort, KY.

to prevent pregnancy.[12]

Despite the public desire for birth control, contraceptive promoters faced significant legal obstacles. The US Congress enacted the Comstock Laws in 1873 to prevent the sending of "obscene, lewd, and/or lascivious" materials through the mail, and courts interpreted the law to prohibit the free exchange of birth control literature and materials.[13] Some birth control advocates, including Margaret Sanger, were arrested and tried under these statutes. By the 1930s, however, support for the obscenity laws was diminishing, and in 1936 a federal appeals court overturned the Comstock prohibitions allowing for the free transmission of contraceptive information.[14]

Before the court ruling, birth control advocates could not use interstate mail to disseminate educational materials, relying instead on public meetings and rallies. Although most of these meetings occurred in large cities, some were held in rural areas of West Virginia and Kentucky. For example, the Cabell County Medical Society in Huntington, West Virginia, invited Margaret Sanger to address their membership in January 1932. However, the invitation drew opposition when Dr. D. J. Cronin, a member of the Society, protested "the Society as a whole, not favoring birth control, was outside its province in inviting Mrs. Sanger." A subsequent vote of the members resulted in the

[12] Carrie Smith, Kate Ellis, and Dorothy Campbell, interviews by Marian Colette and Joie Carroll, 1988, Patterns in Parenting Oral History Collection, Kentucky Historical Society Library, Frankfort, KY.

[13] The Comstock Law was a federal statute passed by the United States Congress on March 3, 1873, as an "Act of the Suppression of Trade in, and Circulation of, Obscene Literature and Articles of Immoral Use." The act was named for Anthony Comstock, a crusader against vice whose name became synonymous with the anti-vice movement of the late 19th and early 20th centuries. For further information see: Nicola Beisel, *Imperiled Innocents: Anthony Comstock and Family Reproduction in Victorian America* (Princeton: Princeton University Press, 1998).

[14] United States v One Package of Japanese Pessaries, 86 F.2d 737 (2nd Cir. 1936). In this case a federal appeals court ruled that the federal government could not interfere with physicians providing contraceptives and contraceptive advice to their patients. This ruling only applied to physicians; other health workers were still prohibited from these activities unless they were supervised by a physician.

invitation's withdrawal.[15] Although the Society succeeded in canceling Sanger's planned visit, their actions created a controversy that played out in the editorial pages of local newspapers over the next week.[16]

When a hastily formed group of local physicians and community leaders invited Sanger again, she spoke to a crowd of 1,000 residents on February 24, 1932. The next day, she addressed a gathering of women "of the better class" in nearby Ashland, Kentucky.[17] Sanger followed these visits with a tour of two West Virginia mining camps. Her address in Huntington resulted in a resolution "favoring the enactment of proper legislation permitting the dissemination of birth control information."[18] The Huntington meeting's impressive audience and the attention generated by Sanger's three-day visit suggest the significance of the birth control issue in West Virginia and Kentucky's coalfields.

In a 1934 letter to Sanger, Wm. H. Keith, Health Officer for Martin County, Kentucky, argued for including birth control services in his department. Keith supported the removal of legal restrictions on the distribution of contraceptive advice because his poor patients were "burdened by a much greater number of children than they can care for, educate, or prepare for a useful place in society."[19] Marie Turner, Superintendent of

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[15] "Medics Withdraw Bid For Address On Birth Control," *Huntington Herald – Dispatch,* February 12, 1932.

[16] For further detail on this controversy see, Letter to the Editor, *Huntington Herald – Dispatch*, February 15, 1932; Editorial, *Huntington Herald – Dispatch,* February 15, 1932; "Mrs. Sanger To Lecture Wednesday," *Huntington Herald – Dispatch,* February 18, 1932.

[17] Lon Rogers to Hon. Fred Vinson, April 22, 1932, Margaret Sanger Papers, Manuscript Division, Library of Congress, Washington, D.C. (MSP – LOC), Box 43, Reel 92.

[18] Resolution from Independent Doctors, February 24, 1932, MSP - LOC, Box 114, Reel 75.

[19] William H. Keith to Margaret Sanger, March 17, 1934, MSP-LOC, Box 120 Reel 79.

the Breathitt County, Kentucky schools, requested funding to provide contraceptive information to young married couples. Turner claimed that she knew "many young women who are greatly interested" in this information but were restricted by their limited access to physicians in rural Appalachia.[20]

Women's groups were another source of support for contraception. From across Appalachia, these groups sent letters and resolutions to their elected representatives advocating for removing restrictions on contraception. The most common example appealed to patriotism and the nation's need for healthy children claiming, "it is of the utmost importance to all Americans that the population of our country be vigorous and healthful both physically and mentally." Other resolutions linked contraception to a future decline in the need for government aid by positing a decrease of "over a quarter of a million babies born into these families (families receiving government relief) per year."[21] These resolutions document an interest in contraceptive availability among middle-class women and demonstrate the presence of politically and socially engaged female reformers in Appalachia. Although these correspondents were not explicitly advocating eugenic ideas, eugenicists shared their concerns and shaped their ideas about rampant and deviant reproduction in the region.

## "The Seed Corn of the Nation": Eugenics in Appalachia

British scientist Sir Francis Galton first described eugenics as the process of

[20] Marie Turner to Dr. Walter Clarke, March 26, 1939, Family Planning in Kentucky Collection, Kentucky Historical Society Library, Frankfort, KY, Box 1, Folder 2.

[21] Resolution passed by West Virginia State Federation of Women's Clubs, May 15, 1935, MSP – LOC, Box 114, Reel 75.

strengthening the human race through selective breeding in 1883.[22] A century later, historian Nancy Stepan proposed a more modern and inclusive definition of eugenics. She wrote,

> Eugenics is a science of heredity that was shaped by political, institutional and cultural factors particular to the historical moment and place in which it appeared as a social movement… with an explicit set of policy proposals that appeared to their proponents to be suggested by, or be logically derived from hereditarian science itself.[23]

Stepan's definition demonstrates the dual nature of eugenic thought, highlighting the blending of biological concepts with social science.[24]

Eugenic ideas became an integral part of Progressive ideology as Progressivism developed as a response to the late nineteenth century's rapid societal changes. Industrialization and urban growth changed America's landscape, and Progressive reformers sought solutions to the problems caused by these changes. Progressivism became a multi-faceted movement that lobbied for government intervention and technological solutions to various social issues.[25] Eugenics became an accepted ideology because modern scientific methods were gaining prestige and were considered a valid

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[22] Francis Galton, *Inquiries into Human Faculty and Its Development* (London: Macmillan, 1883).

[23] Nancy Leys Stepan, *The Hour of Eugenics: Race, Gender, and Nation in Latin America* (Ithaca: Cornell University Press, 1991), 10.

[24] Selected studies on the eugenics movement in America include: Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (Boston: Harvard University Press, 1998); Donald J. Pickens, *Eugenics and the Progressives* (Nashville: Vanderbilt University Press, 1968); Mark Haller, *Eugenics: Hereditarian Attitudes in American Thought* (New Brunswick: Rutgers University Press, 1983); Thomas C. Leonard, *Illiberal Reformers: Race, Eugenics and American Economics in the Progressive Era* (Princeton: Princeton University Press, 2016).

[25] Selected studies on the Progressive movement and Progressive Era include: Michael McGerr, *A Fierce Discontent: The Rise and Fall of the Progressive Movement in America* (New York: Oxford University Press, 2003); Carl J Schneider and Dorothy Schneider, *American Women in the Progressive Era, 1900-1920* (New York: Anchor Books, 1993); William A. Link, *The Paradox of Southern Progressivism, 1880-1930* (Chapel Hill: The University of North Carolina Press, 1992); Robert H. Wiebe, *The Search for Order, 1877-1920* (New York: Hill and Wang, 1966).

way of knowing the truth. Eugenicists soon expanded the scope of their discourse, promulgating their ideas as a means to understand social and moral issues in scientific terms. They offered hope for technological solutions to social concerns that deflected attention away from the problems caused by rapid industrialization, urbanization, and economic dislocation.[26] The American eugenics movement arose in conjunction with Progressive thought, but it survived longer than many other Progressive campaigns. Eugenic concepts continued to influence American ideas on immigration and sexual conduct for many years thereafter.[27]

Although eugenicists always concerned themselves with reproductive fitness and sexual behavior, they developed two different philosophies to create their desired changes. The first, positive eugenics, encouraged the reproduction of those judged to possess advantageous traits to ensure their survival in the population. In contrast, negative eugenics discouraged reproduction by those with hereditary characteristics that were considered undesirable in hopes of eliminating these traits from the population.[28] Most eugenic efforts in Appalachia were of the negative variety, although examples of positive eugenics were also present.

Eugenic activism in West Virginia and Kentucky followed the pattern seen in other rural southern states. In these areas, the prevention of race suicide by whites

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[26] Andre´ N. Sofair, MD MPH and Lauris C. Kaldjian, MD, "Eugenic Sterilization and a Qualified Nazi Analogy: The United States and Germany, 1930-1945." *Annals of Internal Medicine* 132, no. 4 (February 15, 2000), 314.

[27] Wendy Kline, *Building a Better Race: Gender, Sexuality, and Eugenics from the Turn of the Century to the Baby Boom* (Berkeley: University of California Press, 2001), 13.

[28] Diane B. Paul and James Moore, "The Darwinian Context: Evolution and Inheritance," in *The Oxford Handbook of the History of Eugenics,* eds. Alison Bashford and Philippa Levine (New York: Oxford University Press, 2010), 31.

assumed primary importance, and "the eugenically unfit – particularly the 'insane' and 'feeble-minded' – were blamed for a multitude of social problems." Advocates of eugenics proposed compulsory sterilization and eugenic marriage laws, which often garnered the support of physicians and educated elites.[29] Eugenics proponents in West Virginia assumed a prominent position in politics and education by the 1910s, eventually encouraging the state legislature to enact a eugenic sterilization law in 1929.[30]

Although the movement is best known for its emphasis on sterilization, eugenicists often cooperated with birth control advocates to further their respective agendas. The first eugenic sterilization law in West Virginia was proposed during the term of Governor Henry Drury Hatfield.[31] Hatfield, a physician, was elected governor in 1912 and pursued a Progressive agenda that included the state's first workmen's compensation law. He also worked for women's suffrage and cooperation between coal miners and coal operators.[32] A eugenicist, Hatfield promoted an involuntary sterilization statute as a reform measure.

Following his election to the United States Senate in 1928, Hatfield pursued eugenic goals and sponsored federal birth control legislation. In 1931, a birth control bill failed to garner the requisite votes in the Senate judiciary committee of which Hatfield was a member. In 1932, Sanger prevailed upon him to sponsor another birth control

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[29] Edward J. Larson, *Sex, Race, and Science: Eugenics in the Deep South* (Baltimore: The Johns Hopkins University Press, 1995), 1.

[30] J.H. Landman, *Human Sterilization: The History of the Sexual Sterilization Movement* (New York: MacMillan and Co., 1932), 91, 299.

[31] Ellen Chesler, *Woman of Valor: Margaret Sanger and the Birth Control Movement in America* (New York: Simon and Schuster, 1992), 331.

[32] The West Virginia Encyclopedia, s.v. "Henry D. Hatfield."

measure, but it languished in committee without ever coming to a vote.[33] Although Senator Hatfield never passed a birth control bill, his efforts generated intense interest among his constituents.

Prominent local birth control advocates frequently corresponded with Hatfield during this period. One of these individuals, Dr. John N. Simpson, Dean of the School of Medicine at West Virginia University, employed eugenic arguments to justify his support of contraception. In a 1930 letter, Simpson wrote:

> The rich and well-to-do who care to limit the size of their families are already well aware of the means of doing so, and while it may be unlawful, never-the-less they are restricting births. The poor and often-times diseased or mentally unfit are the ones that have larger families and have no knowledge of how to limit them.
>
> If we expect to improve the race and reduce the number of paupers and mental defectives, something will have to be done, and it seems to me that Birth Control…offers the best solution.
>
> What the nation needs is not more children, but healthier, better children who can be developed under environments that will help to advance and not retard our civilization.[34]

In a later letter, Simpson focused on the issues of poverty and economic depression in West Virginia's coal-producing counties when he wrote:

> The effect of the depression should make it obvious to any fair-minded men that there is a great need of such legislation. Here in our coal fields, we find families, of five or six children, many of whom can (*sic)* go to school for the reason that they do not have either clothes or shoes, and the entire family have to be supported by public charity.
>
> It is humiliating to note that even scientific men in our profession, who should see the matter clearly, have in some instances opposed the measure.[35]

Simpson's letters neatly embody many of the eugenics arguments employed by medical

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[33] David M. Kennedy, *Birth Control in America: The Career of Margaret Sanger* (New Haven: Yale University Press, 1970), 230-6; and Chesler, *Woman of Valor,* 330-2.

[34] John N. Simpson M.D., Dean to Senator Henry Hatfield, February 24, 1930, MSP – LOC, Box 127, Reel 83.

[35] John N. Simpson, M.D., Dean to Senator Henry Hatfield, January 3, 1933, MSP – LOC, Box 127, Reel 83.

professionals during this era.

Other groups wrote to Senator Matthew Neely to encourage him to support Senator Hatfield's efforts. Neely was West Virginia's senior senator who rarely cooperated with Hatfield, his political rival. In April 1934, he received a package from Margaret Sanger's organization enclosing letters of support from county Relief Administrators in five West Virginia counties.[36] These letters relied on eugenics arguments to make their case, claiming "the greatest relief that could be given overburdened parents of large families, would be scientific information to limit the size of their family"[37] and "Bills HR 5978 and S 1842 are truly worthwhile measures, which…would tend to lessen much suffering among this class of people (unemployed) in our county."[38] Neely eventually voted in favor of the bills, citing pressure brought by his constituents at home, although he doubted that the legislation would make a significant difference when it was implemented.[39]

Kentucky navigated a divergent path from West Virginia and never adopted a eugenic sterilization statute despite multiple attempts. A sterilization statute passed the General Assembly twice in 1928, but it never obtained the necessary votes in the state

[36] Hazel Moore, Legislative Secretary to Senator H. M. Neely, April 7, 1934, MSP – LOC, Box 166, Reel 108.

[37] Alva Hokanson, County Relief Administrator, Mason County, WV to Margaret Sanger, March 15, 1934, MSP – LOC, Box 166, Reel 108.

[38] H.L. Byers, County Relief Administrator, Pocahontas County, WV to Margaret Sanger, March 7, 1934, MSP – LOC, Box 166, Reel 108.

[39] Notes on meeting with M.M. Neely (Senator: West Virginia), January 20, 1936, MSP-LOC, Box 127, Reel 83.

Senate to become law.[40] Unlike their counterparts from West Virginia, Kentucky's senators were not prominent participants in federal government debates over birth control. Despite these official differences, eugenics was a topic of considerable interest in both states throughout this period.

Appalachia's most recognized health reform enterprise was the Frontier Nursing Service (FNS) of Leslie County, Kentucky. Founded in 1925 by Mary Breckinridge, the FNS provided maternal and child healthcare and delivered the majority of the infants in this isolated and impoverished county through a system of traveling nurse-midwives.[41] Despite her intimate familiarity with the poverty and overpopulation of the area, Breckinridge opposed the widespread provision of contraceptive services and severely restricted their availability to the patients of the FNS. Breckinridge based her opposition to birth control on two somewhat contradictory arguments.

In a 1931 article titled, "Is Birth Control the Answer?", Breckinridge explained her resistance to contraception in rural Appalachia. She couched her primary objection in terms of the race suicide and positive eugenics arguments that were prevalent during this era. Referring to mountain residents as "the seed corn of the nation," she argued that contraception would limit the reproduction of these groups leading to demographic suicide for whites of English descent within the United States. Breckinridge also maintained that mountain residents should be encouraged to have large families because they served as a "feeder for the city" and a "nursery for the finest flower of the old

[40] Steven Noll, *Feeble Minded in Our Midst: Institutions for the Mentally Retarded in the South, 1900-1940* (Chapel Hill: University of North Carolina Press, 1995), 77; George T. Skinner, "Notes: A Sterilization Statute for Kentucky," *Kentucky Law Journal* XXIII, no. 1 (November 1934), 168-174.

[41] For more information on Breckinridge see, Melanie Beals Goan, *Mary Breckinridge: The Frontier Nursing Service and Rural Health in Appalachia* (Chapel Hill: University of North Carolina Press, 2008).

American stock."[42] She also made the unusual claim that "Old Mother Nature gives physical fertility in inverse ratio to physical and spiritual endowments." According to Breckinridge, women were less creative than men because "women have exhausted themselves in giving the creative forces of life to the race." Although most contemporary observers feared overpopulation and dwindling resources, she believed that loss of fertility and population decline were the most serious problems facing humanity. Based on this synthesis of the issues, Breckinridge concluded that economic opportunity and education for mountain youth provided a more lasting solution to the region's problems than contraceptives offered.[43]

These competing eugenic visions informed and complicated the birth control movement in Appalachia as they did elsewhere. As outside reformers and birth control advocates turned their focus to the region, they found a population overwhelmed by the pressures of a high birthrate and poverty without the indigenous social institutions capable of dealing with the problems they faced. To many Appalachian residents and reformers, birth control offered the solution they sought to eliminate these problems as the Great Depression worsened economic conditions in the mountains and provided further impetus for contraceptive programs in the region.

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[42] Mary Breckinridge, "Is Birth Control the Answer?" *Harper's Monthly Magazine* (July 1931): 157-163.

[43] Ibid., 159-161. Mary Breckinridge opposed contraception for most of her patients throughout most of her long career. Her attitude toward contraception evolved during the late 1950s, when her organization participated in birth control trials. This period will be a focus of a later chapter in this dissertation. Although she often made eugenics arguments against contraception, scholars have noted that she had suffered personal tragedy in the deaths of her two children that might have influenced her stance on contraception. For a discussion of this issue see, Dr. Louise Gilman Hutchins, interview by James Reed, Berea, KY, January 31, 1975, transcript, Family Planning Oral History Project Interviews. Schlesinger Library, Radcliffe Institute, Harvard University.

## "The Stork Outran the Grubbing Hoe and Plow": Appalachia and the Great Depression

The onset of the Great Depression in Appalachia intensified the eugenicists' promotion of contraceptive efforts directed at the poor and unemployed residents of the region. Appalachia's major industries, coal mining, and agriculture were already in a precipitous decline before the stock market crash of 1929.[44] As the rest of the United States began experiencing economic deterioration, large numbers of unemployed workers returned to the impoverished region as their jobs disappeared in northern cities. This influx of unemployed workers and their dependents strained Appalachia's already limited capacity to feed its people, and the specter of hunger became real in the mountains.[45]

Life was difficult for the average Appalachian coal miner and his family, even during periods of relative prosperity. Miners worked long hours in dangerous conditions for little pay. Their families frequently lived in company-owned housing that left them subject to homelessness if they lost their jobs or were laid off during the frequent periods of low demand for coal. Even if they remained employed, miners and their families lived in poverty and at the mercy of a medieval system of labor and social control.[46]

Women and children were particularly vulnerable to the vicissitudes of coal camp life. In this patriarchal society, men expected women to keep house, bear and raise

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[44] For more information on the Great Depression in Kentucky and West Virginia see: George T. Blakey, *Hard Times and New Deal in Kentucky, 1929-1939* (Lexington: University Press of Kentucky, 1986); Jerry B. Thomas, *An Appalachian New Deal: West Virginia in the Great Depression* (Morgantown: West Virginia University Press, 2010).

[45] Ronald D. Eller, *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930* (Knoxville: University of Tennessee Press, 1982), 238-9.

[46] Homer Lawrence Morris, *The Plight of the Bituminous Coal Miner* (Philadelphia: University of Pennsylvania Press, 1934), 35-56.

children, and grow food for family consumption. This was a difficult job during good economic times, but it became an insurmountable task for many women as mine work became scarce in the 1930s. Because they had large families and lacked access to land for growing their food, many mine families suffered from malnutrition and its attendant medical complications.[47]

The healthcare system in the coalfields was never particularly robust or effective. Even this modest system failed in the wake of the severe economic challenges faced by the coal industry. Company physicians provided most medical care; they were paid from funds deducted from each miner's pay. As the number of employed miners decreased, the funds available for medical services decreased proportionately. Because the coal companies employed these physicians, they developed expertise in treating workplace injuries and adjudicating workmen's compensation claims. They showed little interest in or aptitude for contraception, preventive medicine, or modern sanitation campaigns.[48]

The consequences of the Great Depression in the Appalachian coalfields are difficult to comprehend from a contemporary vantage point. For example, a children's nutrition program for coal mining communities in eastern Kentucky and West Virginia enrolled children that were more than 10 percent underweight for their height and age. In 1932, 47 percent of the children in these Appalachian coal camps met the eligibility criteria for supplemental nutrition services. Malnutrition led to an increase in infectious and preventable diseases such as tuberculosis, pellagra, and intestinal ailments. A

[47] US Department of Labor, Children's Bureau, *The Welfare of Children in Bituminous Coal Mining Communities in West Virginia,* by Nettie P. McGill, Bureau Publication No. 117 (Washington: Government Printing Office, 1923).

[48] Ross, *Machine Age in the Hills*, 91-3.

contemporary observer noted that the relationship between "these pitiable conditions among the children in the coal camps were due not only to unemployment" but to "ignorance and to families too large for even the employed miner's income."[49] Harry Caudill pithily observed that Appalachia's economic and social problems were exacerbated because "the stork outran the grubbing hoe and plow."[50] This conflation of overpopulation, perceived ignorance, and regional poverty presented an alluring target for the efforts of outside reformers motivated by eugenics ideology.

## Appalachia as a Colony: A New Look at an Old Idea

As outside reformers, politicians, and activists studied Appalachia in the 1960s, they searched for an explanation for the economic and social disparities they found in the region. Although previous generations of reform-minded individuals had alternately discovered and abandoned Appalachia, the 1960s saw another wave of interest crash over the benighted area. In an attempt to intellectualize and categorize the realities they confronted, scholars struggled to theorize an explanation for the chronic poverty and despair they found in Appalachia. One of the enduring and controversial ideas they formulated was the colonial theory of development.[51]

Although the colonial theory was initially promulgated during this era, its central

[49] Morris, *The Plight of the Bituminous Coal Miner*, 105-7.

[50] Harry M. Caudill, *A Darkness at Dawn: Appalachian Kentucky and the Future* (Lexington: University Press of Kentucky, 1976), 23.

[51] Various authors use the terms "colonial theory" or "colonialism theory" to refer to this set of ideas. I have used both appellations in this chapter.

themes and precepts can be found in earlier writings about the region. In *Machine Age in the Hills,* Malcolm Ross described the miseries inflicted upon Appalachia with the advent of industrialization and the societal transformation that attended the process. Although he never used the terms colony or colonialism, Ross described the system eloquently when he quoted an unnamed coal operator from West Virginia who claimed, "it isn't capital that's wrong – it's the fact that the mines are being run for the benefit of people in the cities."[52] Ross identified the outside control of much of the Appalachian coal industry as a significant cause of the contemporary economic problems in the region. The activist authors of *Harlan Miners Speak* shared this view, but they did not directly identify the colonial idea either.[53]

C. Vann Woodward identified colonialism and its encroachment upon the South as a problem for the development of the southern economy and Appalachia in his classic work, *Origins of the New South.* In a chapter appropriately titled "The Colonial Economy," Woodward argued that the southern economy developed as a colonial extension of the northern economy in the post-war period. He described the process as "the Morgans, Mellons, and Rockefellers sent their agents to take charge of the region's railroads, mines, furnaces, and financial corporations."[54] He also decried the dominance of northern chain stores, branch banks, and captive mines that prevented the development of indigenous, locally owned businesses.[55]

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[52] Ross, *Machine Age in the Hills,* 96.

[53] Theodore Dreiser et al., *Harlan Miners Speak: Report on Terrorism in the Kentucky Coal Fields* (1932; repr., Lexington: The University Press of Kentucky, 2008).

[54] C. Vann Woodward. *Origins of the New South, 1877-1913.* Baton Rouge: Louisiana State University Press, 1951), 291-2.

[55] Ibid., 292.

The traditional concept of colonialism refers to the domination of a group of people by representatives of an outside political entity. In a seminal article, sociologist Robert Blauner delineated four components necessary for colonization to occur, a grouping he referred to as the "colonization complex." First, colonization requires that the colonizers make a forced entry into the new area. This does not require the use of military force, although it can be a component of the process. Second, the colonizers must exert undue influence in shaping the culture and social organization of the colonized people. Third, representatives of the colonizer must administer the colonized group, although these representatives may be and often are native to the region. The final requirement is that the colonizing group considers itself racially superior to the indigenous population, making racism an inherent part of the process.[56]

Blauner and others presented a comprehensive description of the process of colonization. Still, their theory focused on the issue of colonization of one state or nation by representatives of an outside power. This particular version of colonization theory was not applicable to Appalachia for this reason alone. However, some scholars argued that all four conditions were met in the Appalachian case with only minor alterations.

In 1962, Harry Caudill reintroduced Appalachia and its problems to the American public with the publication of his influential book; *Night Comes to the Cumberlands.* In this work, Caudill eloquently depicted the problems he observed in Appalachia and provided his prescription for their solution. Caudill claimed, "for all practical purposes the plateau has long constituted a colonial appendage of the industrial East and Middle

[56] Robert Blauner, "Internal Colonialism and Ghetto Revolt," *Social Problems* 16, no. 4 (Spring 1969): 395-6.

West, rather than an integral part of the nation generally."[57] Although he appeared sympathetic to the idea, Caudill did not adopt the colonial argument definitively. Throughout this book, he frequently endorsed the contemporary culture of poverty model to explain his findings.[58]

The culture of poverty model attempted to explain the existence of poverty by blaming the poor and their deficient culture for their economic plight. This model was widely applied to explain poverty in the 1960s after Oscar Lewis and others popularized it.[59] Appalachian scholars adopted this model and applied it to the specific problems of their region despite its apparent shortcomings.[60]

While the culture of poverty model enjoyed a period of favor within the social sciences, its deficiencies soon became apparent. Sociologist David Walls described the model as having "very limited validity" in Appalachia because it failed to address three fundamental problems. The problems Walls identified included a lack of a specific research methodology, "a blurring of community and social class diversity in the region, and a lack of historical perspective."[61] Further criticism centered on these issues and a

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[57] Harry Caudill, *Night Comes to the Cumberlands: A Biography of a Depressed Area* (Boston: Little, Brown, 1963), 325.

[58] Ibid.

[59] For further information about the Culture of Poverty model see; Oscar Lewis, *The Children of Sanchez: Autobiography of a Mexican Family* (New York: Random House, 1961) and Oscar Lewis, *La Vida: A Puerto Rican Family in the Culture of Poverty – San Juan and New York* (New York: Random House, 1965).

[60] A number of scholars promoted the Culture of Poverty model as an explanation for Appalachia's perceived deficiencies. For further information see; Jack Weller, *Yesterday's People: Life in Contemporary Appalachia*, (1965, repr., Lexington: The University Press of Kentucky, 1995), 7.

[61] David S. Walls, "Internal Colony or Internal Periphery: A Critique of Current Models and an Alternative Formulation," in *Colonialism in Modern America: The Appalachian Case,* eds. Helen Matthews Lewis, Linda Johnson, and Donald Askins (Boone, NC: The Appalachian Consortium Press, 1978), 320.

concern that the culture of poverty model allowed reformers to blame the Appalachian poor for their poverty while ignoring structural economic and political issues that played a prominent role in the generation of the region's woes.[62]

Appalachian scholars adapted the colonial model to local conditions to counter the culture of poverty model and more accurately reflect the problems they encountered in the region. Led by sociologist Helen Matthews Lewis, these scholars were unwilling to accept the tenets of the culture of poverty model and sought an alternative model that addressed issues of causation. In 1978, Lewis edited *Colonialism in Modern America: The Appalachian Case,* a volume of essays that applied the colonial model to Appalachia and its problems.[63]

Lewis argued that the colonial model applied to Appalachia because of its focus on the domination of the colonizer over the colonized. The colonial model proposed by Blauner proved adaptable to the Appalachian case because "he (Blauner) accounts for the cause and perpetuation of the condition, and because he is concerned with processes he goes beyond mere description."[64] Although the colonialism model explained many of the issues associated with poverty in Appalachia, it required modification to encompass the complexities of the regional situation.

The chief problem encountered by Appalachian advocates of the colonialism

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[62] Helen Matthews Lewis, "Introduction: The Colony of Appalachia," in *Colonialism in Modern America: The Appalachian Case,* eds. Helen Matthews Lewis, Linda Johnson, and Donald Askins (Boone, NC: The Appalachian Consortium Press, 1978), 1-5.

[63] Helen Matthews Lewis, Linda Johnson, and Donald Askins eds., *Colonialism in Modern America: The Appalachian Case* (Boone, NC: Appalachian Consortium Press, 1978).

[64] Helen Matthews Lewis and Edward E. Knipe, "The Colonialism Model: The Appalachian Case," in *Colonialism in Modern America: The Appalachian Case,* eds. Helen Matthews Lewis, Linda Johnson, and Donald Askins (Boone, NC: The Appalachian Consortium Press, 1978), 17.

model centered on the lack of an outside force as represented by emissaries of another country. Appalachia's colonizers usually came from the United States, and the same laws that governed their colonized subjects in Appalachia purportedly governed them. There was no reasonable possibility of the dominated group effectively throwing out their oppressors and determining their destiny. This complication led scholars and activists to propose the more specific Internal Colonialism Model to remedy this shortcoming.[65]

The internal colonialism model described the relationship between outside capitalist interests that controlled the Appalachian economy and the residents of the southern mountains in ways that exposed some of the structural inequities that existed in Appalachia. The application of this model led to an outpouring of scholarship on the region. Still, detractors claimed that the new model was created more in response to contemporary New Left political needs and less in response to the academic search for an applicable explanatory model.[66]

Much of the impact of the internal colonialism model derived from its emphasis on the outsized influence held by absentee landowners in the region. In a monumental project, the Appalachian Land Ownership Task Force researchers surveyed land ownership records in eighty counties in six Appalachian states to develop a portrait of land ownership patterns in the region in the 1970s. The authors concluded that increasing the region's integration into the national economy would not result in economic development in the setting of outside control of the region's land and resources. They further argued for the depiction of Appalachia as an internal colony controlled by

[65] Lewis, "Introduction," 3.

[66] Walls, "Internal Colony," 322.

external landowners for their benefit, without reference to the possibility of Appalachian economic development intended to benefit the mountain residents.[67]

Taking a different approach but reaching a similar conclusion, John Gaventa published *Power and Powerlessness* in 1980. In this study of the Clear Fork Valley, along the Kentucky and Tennessee border, the author examined why local communities did not resist the absentee landowners that he argued were responsible for much of the destitution in the region. Instead of studying the broader Appalachian region, Gaventa focused his analysis on a smaller geographic area and argued that unequal power relationships between local residents and outside landowners are self-sustaining and that "power serves to create power."[68] Gaventa rejected the culture of poverty model in favor of an analysis rooted in the colonialism model.

Although scholars chiefly used the internal colonialism model as a mechanism to understand asymmetric economic, political, and social relationships between Appalachian residents and outside industrialists and absentee landowners, they also applied it to analyses of healthcare, economic development, and government assistance programs.[69] Scholarly attention to healthcare issues centered on local community efforts to ensure access to appropriate comprehensive services or to define and publicize occupationally induced diseases, particularly coal miners' pneumoconiosis or "black lung" disease.[70]

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[67] Appalachian Land Ownership Task Force, *Who Owns Appalachia? Landownership and Its Impact* (Lexington: The University Press of Kentucky, 1983) 64.

[68] John Gaventa, *Power and Powerlessness: Quiescence and Rebellion in an Appalachian Valley* (Urbana: University of Illinois Press, 1980), 320.

[69] Lewis, "Colonialism," 22-4.

[70] Barbara Ellen Smith, *Digging Our Own Graves: Coal Miners and the Struggle Over Black Lung Disease* (Philadelphia: Temple University Press, 1987). For a further example of application of the

In 1987, sociologist Barbara Ellen Smith published, *Digging Our Own Graves,* her analysis of the struggle to define black lung disease as an occupational hazard of coal mining and to gain recognition and compensation for its sufferers. In this work, Smith documented a social movement that defied both the government and entrenched economic interests to eventually secure these goals. She situated her analysis of the black lung movement within the parameters of internal colonization theory. However, she visualized a more hopeful future for indigenous resistance than that envisioned by Gaventa a few years earlier. Smith further argued that the efforts of the black lung movement not only resulted in "recognition and compensation for occupational lung disease but also the revelation of a complex relationship between the ideological content of medicine and the economic power of capital."[71]

The colonialism model served as a primary mechanism for the understanding of Appalachia for several years. More recently, scholars have attacked the model for its simplicity and dichotomous categorization of outside versus inside interests that ignores the complexities of Appalachian society and the role of groups within the mountains that cooperated in and profited from the dominance of outside capital.[72] Although Appalachian scholars retreated from their reliance on colonialism theory to explain

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colonialism model to the issue of Appalachian healthcare see, Richard Couto, *Poverty, Politics, and Health Care: An Appalachian Experience* (New York: Praeger Publishers, 1975).

[71] Smith, *Digging Our Own Graves,* 218.

[72] For criticisms of the colonialism model and its applicability to the Appalachian situation see; David S. Walls, "Internal Colony or Internal Periphery: A Critique of Current Models and an Alternative Formulation," in *Colonialism in Modern America: The Appalachian Case,* eds. Helen Matthews Lewis, Linda Johnson, and Donald Askins (Boone, NC: The Appalachian Consortium Press, 1978), 320; Paul Salstrom, *Appalachia's Path to Dependency: Rethinking a Region's Economic History* (Lexington: The University Press of Kentucky, 1994); Dwight B. Billings and Kathleen M. Blee, *The Road to Poverty: The Making of Wealth and Hardship in Appalachia* (New York: Cambridge University Press, 2000), 8-17.

Appalachia's economic difficulties, there are specific situations where I argue that the model continues to be applicable. Reproduction, sexuality, and race provided fertile terrain to work out a revised and more specific theory of internal colonialism in Appalachia.

In 2002, Laura Briggs published *Reproducing Empire,* her study of the colonial relationship between the United States and Puerto Rico and how that relationship played out in providing women's health and contraceptive services on the island. Briggs argued that the United States projected many of its colonial ambitions onto Puerto Rico through an attempt to regulate the sexuality and reproduction of the island's women. By depicting Puerto Ricans as sexually deviant, American reformers could intervene to correct the purported cultural deficiencies that led to the production of this difference. Only then, once Puerto Ricans were converted into proper Americans, could the modernization and assimilation of the island be completed. [73]

Briggs' scholarship examines the colonial project through the lens of reproduction and gender relations. Instead of focusing on economic development and political marginalization issues, she depicted the colonial relationship in an entirely different fashion. In doing so, the author refocused the analysis away from the traditional dichotomy between outside capital and indigenous labor. This shift in focus allowed Briggs to implicate progressive and liberal reformers in her criticism of the American colonial enterprise in Puerto Rico.

The concordance between Briggs' ideas about Puerto Rico and the situation in Appalachia is not exact, but four of her basic ideas apply to the Appalachian situation.

[73] Briggs, *Reproducing Empire.*

First, colonial authorities constructed Puerto Rico and Puerto Ricans as different from other Americans. This construction of difference also occurred in the Appalachian setting, with Appalachian residents seen as both poor and poorly behaved, as evidenced by the related stereotypes of the hillbilly mountaineer and the uncouth feudist. As in the Puerto Rico experience, many of these Appalachian images have been disseminated by outsiders with a vested interest in the creation and maintenance of Appalachian difference.[74]

Second, the discourse of overpopulation has been employed as a critique of both areas. This discourse claims that poverty, hunger, inadequate housing, and unemployment were directly linked to a rapidly expanding and unsustainable population. The corollary to this idea is that limiting population growth would eliminate these problems and allow for the modernization of the affected areas. Although no direct empirical evidence supported these assertions, this narrative dominated much of the thinking about Puerto Rico and Appalachia during the 1930s and beyond.

Third, residents of both Puerto Rico and Appalachia were depicted as being racially distinct from mainstream American whites. Puerto Ricans were seen as either black with African ancestry or Hispanic with Spanish ancestry. Both groups were constructed as different from average Americans. Most Appalachian residents were white, but they were viewed as racially different and "not quite white" enough to function appropriately in modern American society. Because these groups were seen as different, their reproduction was viewed as dangerous to the survival of the dominant but

[74] Altina L. Waller, *Feud: Hatfields, McCoys, and Social Change in Appalachia, 1860-1900* (Chapel Hill: The University of North Carolina Press, 1988); Matt Wray, *Not Quite White: White Trash and the Boundaries of Whiteness* (Durham: Duke University Press, 2006); W.K. McNeil, ed., *Appalachian Images in Folk and Popular Culture,* 2nd ed. (Knoxville: The University of Tennessee Press, 1995).

supposedly imperiled white American majority.[75]

Fourth, women in both Puerto Rico and Appalachia were held to be responsible for the economic and social issues that faced their communities. Because reproduction was viewed as a female prerogative, the results of overzealous and deviant reproductive practices resulted in societal decay and increasing economic distress. Only through controlling the reproductive habits of these unruly women could authorities modernize these areas and integrate them into the mainstream of American society.

These ideas apply to Appalachia and provide a productive framework to examine the complexities of the colonial relationship that developed in the region after the influx of outside capital led to the industrial transformation of the early 20th century. Like Puerto Ricans, Appalachians were seen as dirty and sexually deviant. Their reproduction was of great interest to outside reform groups because it prevented their smooth assimilation into the larger American society. Often, Appalachian otherness was produced through the discourse of deviant reproduction and sexuality advanced by these reformers. [76]

## "A Vast Experiment in Race Building": The Logan County Contraceptive Trial

One reformer drawn to Appalachia during this period was Dr. Clarence Gamble.

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[75] Anthony Harkins, *Hillbilly: A Cultural History of an American Icon* (New York: Oxford University Press, 2005); Matt Wray, *Not Quite White.*

[76] The idea of deviant reproduction and sexuality among Appalachian residents was a common trope among reformers, regional writers, and outside observers. For recent treatments of this issue see: Evelyn Ashley Sorrell, " 'She Now Cries Out': Linda Neville and the Limitations of Venereal Disease Control Policies in Kentucky," in *Women of the Mountain South: Identity, Work, and Activism,* eds. Connie Park Rice and Marie Tedesco (Athens: Ohio University Press, 2015), 350-71; Deborah L. Blackwell, "Female Stereotypes and the Creation of Appalachia, 1870-1940," in *Women of the Mountain South: Identity, Work, and Activism,* eds. Connie Park Rice and Marie Tedesco (Athens: Ohio University Press, 2015), 74-94.

Gamble was a prominent Philadelphia physician who conducted contraceptive research studies. He believed that providing cheap and effective contraceptive methods to poor women was necessary to combat poverty and overpopulation. Based on these beliefs, he supplied funds and professional expertise to perform studies of contraceptive medications and techniques on an international scale. In 1933, Gamble determined that rural West Virginia was the appropriate setting for his subsequent birth control trial because of the local population's high fertility and extreme poverty.[77]

Clarence Gamble was born in Cincinnati, Ohio, in 1894, an heir to a portion of the Proctor and Gamble fortune. He was educated at Princeton University and Harvard Medical School and embarked on a medical research career in Philadelphia after graduation. One of his early projects involved testing the efficacy of contraceptive jellies for the local birth control clinic. From this initial involvement, Gamble developed a lifelong interest in contraceptive development and testing.[78]

In 1929, Gamble cooperated with Robert Latou Dickinson to create a birth control clinic in his native Cincinnati.[79] He had developed his interest in contraception around his eugenic understanding of the differential fertility between women of different socioeconomic classes. Gamble envisioned contraception as a mechanism for the poor and underprivileged to plan their childbearing while limiting the number of children born

[77] Doone Williams and Greer Williams, *Every Child a Wanted Child: Clarence James Gamble, MD and His Work in the Birth Control Movement* (Cambridge: Harvard University Press, 1978), 121.

[78] James Reed, *The Birth Control Movement*, 227-233.

[79] Robert Latou Dickinson (1861-1950) was an American Obstetrician and Gynecologist who devoted his career to contraceptive research and the treatment of sexual problems. He was a prominent figure in the American birth control movement and founded the National Committee on Maternal Health in 1923. For further information about Dickinson and his contraceptive work, see, Reed, *The Birth Control Movement,* 143-193.

to them. He completed his vision by encouraging reproduction among middle- and upper-class couples to increase the number of children from these presumably superior parents. His eugenic views effectively combined both negative and positive eugenic ideas.[80]

For Gamble and his collaborators, rural West Virginia provided an ideal location for a birth control trial because of its high birthrate, limited access to effective forms of contraception, and worsening poverty. The state offered an opportunity for researchers to test their methods on a population that appeared to be in desperate need of their services. Although West Virginia seemed to present an excellent location for a contraceptive trial, promoters also expressed concerns about local opposition, and cultural practices they feared would inhibit the trial's successful completion.[81]

Gamble discounted these concerns when he chose to organize his initial Appalachian contraceptive study in Logan County, West Virginia. He recognized that cooperation with a local group would allow his investigation to proceed in an environment he lacked familiarity with. By choosing this path, Gamble became involved with outside reform groups that were common in Appalachia during this period. These groups would prove useful to Gamble, but their presence in the area also raised concerns about their motives and methods.

In the 1970s, Appalachian historical scholarship switched from a focus on ruling elites to a consideration of the social, economic, and cultural issues affecting ordinary people. This trend began with the publication of Henry Shapiro's *Appalachia on Our Mind: The Southern Mountains and Mountaineers in the American Consciousness* in

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[80] Reed, *The Birth Control Movement,* 235.

[81] Ross, *Machine Age in the Hills,* 135.

1978. In this seminal work, Shapiro detailed the presence of outside reformers in Appalachia and their influence on American perceptions of the region. He concluded that, although tales of poverty and despair initially drew reformers to the region, these same reformers eventually reinforced these negative stereotypes through their own selfish depictions of Appalachia.[82]

In his monograph, *All That is Native and Fine: The Politics of Culture in an American Region,* David Whisnant explored similar themes in his examination of Appalachian reform institutions. Whisnant argued that reformers emphasized cultural endeavors instead of tackling the region's problems of entrenched poverty and rapid industrialization. In Whisnant's view, reformers focused on less controversial cultural activities because they helped encourage donations from outside sources. He reserved particular scorn for mountain craft industries that developed in conjunction with settlement schools, claiming that these programs perverted indigenous crafts to render them acceptable to middle-class American buyers. By replacing local craft styles with more modern designs, the reformers influenced their students to adopt middle-class American cultural norms.[83]

Whisnant's provocative claims regarding missionaries and reformers led to an increased interest in Appalachian cultural values and their effect on the region's development. Historians produced works examining the histories of specific settlement schools that documented the positive influences of the schools and their leaders on the

[82] Henry D. Shapiro, *Appalachia On Our Mind: The Southern Mountains and Mountaineers in the American Consciousness, 1870-1920* (Chapel Hill: University of North Carolina Press, 1978), 3-31.

[83] David Whisnant, *All That is Native and Fine: The Politics of Culture in an American Region* (Chapel Hill: The University of North Carolina Press, 1983).

Appalachian communities they served.[84] Other Appalachian scholars published studies that disputed Whisnant's controversial thesis. [85] Although Whisnant did not consider the role of healthcare reform enterprises in Appalachia, his fundamental analysis applies to these reformers and their activities.[86]

In an attempt to enlist local assistance with the trial, Gamble approached the Pioneer Youth of America (PYA), a socialist youth organization sponsored by a consortium of labor unions.[87] The PYA conducted a youth camp for miner's children in Logan County and provided relief services for local families. Gamble offered to bear the expense of a contraceptive program if the PYA would administer his proposed program in Logan County.[88] After much discussion and negotiation, the PYA declined to cooperate with Gamble because "the natural antagonisms which are aroused by people interested in labor groups are enough to make any kind of work difficult in a conflict

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[84] P. David Searles, *A College for Appalachia: Alice Lloyd on Caney Creek* (Lexington: University Press of Kentucky, 1995); Jess Stoddart, *The Story of Hindman Settlement School* (Lexington: University Press of Kentucky, 2002).

[85] Nancy Forderhase, "Eve Returns to the Garden: Women Reformers in Appalachia in the Early Twentieth Century," *Register of the Kentucky Historical Society* 85 (Summer 1987): 237-261; Karen Tice, "School-Work and Mother-Work: The Interplay of Maternalism and Cultural Politics in the Educational Narratives of Kentucky Settlement Workers, 1910-1930," *Journal of Appalachian Studies* 4, no. 2 (Fall 1998): 191-224.

[86] For historical studies of health reform in Appalachia see Sandra Lee Barney, *Authorized to Heal: Gender, Class, and the Transformation of Medicine in Appalachia, 1880-1930* (Chapel Hill: The University of North Carolina Press, 2000); Melanie Beals Goan, *Mary Breckinridge: the Frontier Nursing Service and Rural Health in Appalachia* (Chapel Hill: The University of North Carolina Press, 2008); Dana Allen Johnson, "A Cage of Ovulating Females: Mary Breckinridge and the Politics of Contraception in Rural Appalachia" (master's thesis, Marshall University, 2010).

[87] Paul C. Mishler, *Raising Reds: The Young Pioneers, Radical Summer Camps, and Communist Political Culture in the United States* (New York: Columbia University Press, 1999), 84; *The Encyclopedia of the American Left*, 2nd. Ed. (New York: Oxford University Press, 1998), s.v. "Summer Camps."

[88] Clarence Gamble MD to Agnes Sailer, November 1, 1933, CGP, Francis A. Countway Library of Medicine, Harvard University, Boston, MA (CGP), Box 44, Folder 724.

situation."[89] The group's apprehension about negative publicity was borne out when Lorena Hickok visited their camp in August 1933. Hickok expressed concern that children in the camp were being indoctrinated in communism and declared, in a letter to Eleanor Roosevelt, "I do not like Communists."[90]

Gamble's proposed alliance with the Pioneer Youth of America highlighted his limited understanding of West Virginia politics and his insensitivity to local social concerns. Logan County was a hotbed of labor union activism with a history of violent clashes between union supporters and mine operators. A corrupt, anti-union elite that ruled with ruthless brutality and opposed any union organizing activity controlled the county government.[91] The PYA's leadership wisely declined the opportunity to involve their embattled organization in Gamble's anticipated trial.

Undeterred, Gamble contacted the Friends Health Service (FHS) in Logan County and offered to fund a trial of contraceptives in the local coal mining company towns. A branch of the American Friends Service Committee (AFSC), the FHS provided health services, including maternal health services, to indigent local residents. In 1917, members of the Religious Society of Friends (Quakers) organized the AFSC in anticipation of the relief needs of Europe after World War I. Before the war ended, AFSC volunteers went to France to organize an assistance program for German prisoners of war. After the war, they conducted a survey in Germany and reported on the severe malnutrition they found

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[89] Agnes Sailer to Clarence Gamble MD, January 24, 1934, CGP, Box 44, Folder 724.

[90] Lorena Hickok to Eleanor Roosevelt, August 22, 1933, FERA Papers, August 1933, Franklin D. Roosevelt Library, Hyde Park, NY, Box 12, Hickok Collection. Quoted in Jerry Bruce Thomas, *An Appalachian New Deal: West Virginia in the Great Depression* (Morgantown: West Virginia University Press, 1998), 195.

[91] Eller, *Miners, Millhands,* 215-6; Thomas, *An Appalachian New Deal,* 36-7.

there. Herbert Hoover recruited the Quaker group to carry out a feeding program in Germany and financed it through funds he had collected for the American Relief Administration. Within four years, the AFSC was feeding one million German children each day.[92]

The AFSC first began work in West Virginia in July 1922 when a downturn in the coal industry led to economic hardship among unemployed miners' families.[93] They established a children's feeding program and clothing distribution center that operated for nearly a year until conditions improved. The AFSC monitored conditions in the mining areas and returned to West Virginia in May 1931 at the request of President Hoover as the Depression worsened and needs in the coal mining areas increased. In 1933, Herman Kump, the Governor of West Virginia, asked the AFSC to provide nutrition, housing, clothing, educational, and medical services to impoverished miners and their families.[94]

As a denomination, Quakers held no clear theological position on birth control. American Quakers practiced family limitation from the colonial period forward as they consistently had a fertility rate 25 percent below the average for other white Americans throughout the eighteenth century.[95] In 1924, a decade before the Logan County trial, a group of British Quakers published a pamphlet, "Marriage and Parenthood: The Problem of Birth Control." This pamphlet advocated for contraception for married couples and

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[92] Melissa K. Elliott, *Undaunted Spirits: True Stories of Quaker Service* (Philadelphia: American Friends Service Committee, 2002), 13-4.

[93] Mary Hoxie Jones, *Swords into Ploughshares: An Account of the American Friends Service Committee, 1917-1937* (New York: Macmillan, 1937).

[94] Memorandum, Eleanor to David Henley, "AFSC Work in the Coal Fields," May 2, 1947, AFSCA, Philadelphia, PA, Coal Areas Folder.

[95] Robert V. Wells, "Family Size and Fertility Control in Eighteenth-Century America: A Study of Quaker Families," *Population Studies* 25, no. 1 (March 1971): 81-2.

refuted the idea that contraceptive use promoted immorality and promiscuity.[96] Despite their apparent support for contraception, there is no record of official Quaker or AFSC participation in any contraceptive trials before the Logan County trial.

Because the local community welcomed the AFSC and its other programs, group leaders were willing to participate in the planned contraceptive trial. Gamble proposed to distribute a vaginal jelly contraceptive to interested women through a FHS nurse. Patients would first be evaluated and complete an intake questionnaire, and if approved, the nurse would supply the jelly and instructions on its proper use. Refills were provided at subsequent clinic visits or by mail order at no cost to the patient.[97]

Gamble's choice of a spermicidal jelly for the Logan trial reflected his biases and lack of understanding of Appalachian culture and society. He knew that Appalachian women were already acquainted with withdrawal, condoms, and post-coital douching. Still, these approaches were not particularly effective, and two of them relied on the active participation of the male partner. Only douching, the least effective of the three, was controlled by the female partner. Although these methods were either ineffective (withdrawal, douching) or expensive (condoms), they were widely used by local women.[98] The most effective contemporary method - a professionally fitted diaphragm with spermicidal jelly - was costly and presumed to be difficult for local women to use effectively because it required a level of initiative, sanitation, intelligence, and privacy

[96] Quakers in the World, "Quakers and Sexuality," http://www.quakersintheworld.org/quakers-in-action/170 (accessed May 3, 2012).

[97] Beebe, *Contraception and Fertility,* 42-3.

[98] Ibid., 39-40.

Appalachian women were not felt to possess.[99]

The controversy about the choice of jelly for the Logan study provides contemporary readers with insight into the somewhat haphazard state of medical research during this era.[100] Because some residents were using contraceptive jellies of their choosing before the trial, researchers required that all research subjects use only the specific jelly chosen by the study coordinators.[101] Of course, this was a reasonable requirement to assure the validity of the study results, but it is questionable whether this criterion was routinely enforced. There were multiple incidents where the study nurse provided a different jelly to study patients; it is impossible to determine whether the nurse included the data from these patients in the final statistical analysis.[102]

The exact composition of the contraceptive jelly was also unknown to the medical personnel during the study. Such a breach of modern research ethics astounds the contemporary observer but does not appear to have been unusual at the time. Ortho Gynol, a contraceptive jelly produced by Johnson and Johnson, was chosen for the trial after arduous negotiations between the study coordinators and the pharmaceutical

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[99] Williams, *Every Child a Wanted Child,* 119-120.

[100] For information on the history of clinical trials and informed consent see, Ruth R. Fadden and Tom L. Beauchamp, *A History and Theory of Informed Consent* (New York: Oxford University Press, 1986) and Harry M. Marks, *The Progress of Experiment: Science and Therapeutic Reform in the United States, 1900-1990* (Cambridge: Cambridge University Press, 1997).

[101] Raymond Squier MD to Doris Davidson, March 4, 1936, AFSCA, Social Industrial Section, Rehabilitation, Friends Health Service.

[102] Alice Beaman to Homer Morris, Reports, May 16, 1936 through September 15, 1936, AFSCA, Social Industrial Section, Rehabilitation, Friends Health Service, Correspondence.

company.[103] Because they were testing a new formulation, Johnson and Johnson was unwilling to divulge the exact ingredients for fear of having their formula stolen by competing firms. They finally agreed to provide a list of some of the ingredients and another list of compounds that were absent from the formulation.[104] In effect, this secrecy resulted in a study in which the researchers provided an unknown medication to patients with limited knowledge of possible side effects or efficacy.

Patients in the Logan Trial were not required to provide any type of consent other than their willingness to participate in the study. There is no official record of what patients were told when they enrolled in the trial. Still, it appears that much of the information they received was inaccurate or skewed to encourage their participation. Alice Beaman, a nurse employed by the FHS to conduct the contraceptive study, described this process:

> Now that I am giving (emphasis in original document) jelly, I have to explain that it is given to us to give away, but that some day the women will have to pay for it. It is hard to explain without going into the whole project, which Dr. Squier said should not be done. But I do have to say enough to make them understand that the jelly is the best there is even though it is free.[105]

This passage from Beaman's report demonstrates the lack of transparency and the misinformation provided to potential patients by the study's supervisors. Dr. Raymond Squier, Executive Secretary of the National Committee on Maternal Health, instructed

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[103] Raymond Squier MD to Dr. H.L. Daiell, March 25, 1936, CGP, Box 44, Folder 726; Raymond Squier MD to Dr. H.L. Daiell, April 2, 1936, CGP, Box 44, Folder 726; Gilbert Beebe to Raymond Squier MD, April 7, 1936, CGP, Box 44, Folder 726.

[104] H.L. Daiell MD to Dr. Raymond Squier, February 26, 1936, CGP, Box 44, Folder 726; Raymond Squier MD to Dr. H.L. Daiell, March 2, 1936, CGP, Box 44, Folder 726; H.L. Daiell MD to Dr. Raymond Squier, March 16, 1936, CGP, Box 44, Folder 726.

[105] Alice Beaman to Homer Morris, Reports, June 20, 1936, AFSCA, Social Industrial Section, Rehabilitation, Friends Health Service, Correspondence.

Beaman to avoid explaining the entire project to the patients. Despite the lack of evidence to bolster this assertion, she portrayed the jelly of unknown composition as "the best there is."

The Logan trial did not begin to enroll participants until 1936 because it took nearly two years to complete negotiations between Gamble, the AFSC, pharmaceutical companies, and outside sponsoring agencies. Most of the discussions centered on funding for the project and delineation of a study protocol. The original idea for the study involved a service "whereby women in isolated districts may be reached and instructed in a simple method of birth control in their own homes."[106] The AFSC altered the plan to incorporate the existing maternal health clinic operated by the FHS in Logan, partly because of opposition to the original plan from local physicians.[107]

Gamble was already a controversial figure in the birth control movement because of his willingness to fund birth control research from his personal fortune and his notorious unwillingness to work cooperatively with other researchers he disagreed with. Because of his autocratic management style, Gamble made many enemies in the movement. Still, he was able to persuade three national contraceptive advocacy organizations to work with him on the Logan project. Despite his reputation, he convinced the American Birth Control League (ABCL), The National Committee on Maternal Health (NCMH), and the Milbank Memorial Fund to cooperate in performing

[106] Winnifred Wenke to Homer Morris, July 26, 1935, AFSCA, Social Industrial Section, Coal Area Projects, Friends Health Service.

[107] Homer Morris to Miss Alice Beaman, December 3, 1935, AFSCA, Social Industrial Section, Coal Area Projects, Friends Health Service.

the Logan County trial.[108]

This feat of coordination and negotiation demonstrated Gamble's considerable talents. The ABCL, founded by Margaret Sanger in 1921, focused on birth control education and legislative reform efforts.[109] The NCMH, founded in 1923 by physicians and contraceptive advocates, including Gamble's mentor Robert L. Dickinson, provided an organizational framework for conducting contraceptive research.[110] The Milbank Memorial Fund was a philanthropic organization that provided funding for public health research, including contraception and population control studies.[111] Gamble managed to convince this disparate and often fractious group of organizations to fund and conduct the Logan County trial under the auspices of the AFSC.

Although Gamble convinced some outside physicians to support his trial, he encountered opposition from local physicians. They opposed birth control and the birth control trial for several reasons. Some, like Dr. Cronin from Huntington, opposed birth control on moral and religious grounds. Since medicine was a male-dominated profession, it is likely that some physicians feared that birth control served to empower women and deprive men of their traditional control over women.[112] The most common objection, however, centered on economic issues.

Members of the Logan County Medical Society met with Dr. Raymond Squier in

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[108] Reed, *The Birth Control Movement,* 249.

[109] Kennedy, *Birth Control in America,* 97-105.

[110] Johanna Schoen, *Choice and Coercion: Birth Control, Sterilization, and Abortion in Public Health and Welfare* (Chapel Hill: The University of North Carolina Press, 2005), 29-30.

[111] Reed, *The Birth Control Movement,* 203-6.

[112] Gordon, *The Moral Property of Women,* 109.

May 1936 to discuss the proposed contraceptive trial. Squier attempted to ease the concerns of local physicians and to enlist their support by assuring them that "there was no possibility that this project would encroach on the field of anybody's private practice." This assurance, combined with a detailed explanation of the project, resulted in a vote of confidence from the group, which pledged to cooperate with the trial. Despite the vote of confidence, physicians continued to raise concerns about competition for patients throughout the trial.[113]

Perverse economic incentives may have played a role in encouraging physicians to oppose the trial. Physicians employed by mining companies received a salary for their services. Miners paid a monthly fee to ensure access to outpatient care and hospital benefits, but this fee did not cover maternity services. When they provided maternity services, physicians charged twenty-five dollars per delivery. This money provided a unique opportunity for these physicians to enhance their income.[114] Some company physicians likely opposed contraceptive services because a decrease in deliveries directly reduced their incomes, without equivalent compensation from the contraceptive program.

Despite the opposition from some local physicians, there was strong support for the trial from outside donors and contraception advocates. Much of this support depended on the eugenic nature of the trial. A letter to Winnifred Wenke of the FHS from Doris Davidson of the American Birth Control League described the possibilities of a study in Logan County. Davidson wrote,

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[113] Alice Beaman Report to Homer Morris, March 8, 1936 and May 29, 1936, AFSCA, Friends Health Service, Correspondence.

[114] President, Mountain Maternal Health League to Mrs. Gray, Executive Secretary of Illinois Birth Control League, 1941, CGP, Box 14, Folder 282.

> In discussing with Dr. Gamble the various localities in West Virginia where the need for birth control seems most urgent…I want you to know that I unhesitatingly chose Logan and you!
>
> Personally, I regard this proposed undertaking of tremendous significance, and do not feel it an exaggeration to say that such a work would be laying the foundation for a **vast experiment in race building never before attempted or even considered in the whole field of welfare work** (emphasis mine).[115]

Squier also supported the trial for eugenic reasons. In a report of his May 1936 visit to Logan, he described the local residents as,

> the people among whom the experiment will be carried out looked surprisingly good, biologically, as if they came of good stock, but had been thwarted by environmental factors. Though not strictly homogeneous, they seemed to present fewer racial admixtures than in most communities.[116]

Squier also commented on the local living conditions when he condescendingly described the living quarters of local miners' families as "their so-called homes."[117]

Among the Quaker volunteers in Logan County, there was great enthusiasm for the upcoming study, and they usually described the residents and their needs in a more respectful manner. Winnifred Wenke, for instance, viewed the trial as a mechanism "of bettering conditions in the homes through Maternal Health work alone." By providing contraception to mothers, Wenke sought to provide "better health for mothers" and "proper spacing of children to preserve strength for the mother and give the child a chance to be well born." However, she did not completely ignore the economic dimension of the problem when she advocated for "curtailing of large families to meet

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[115] Doris Davidson to Winnifred Wenke, July 7, 1935, AFSCA, Coal Area Projects, Logan County, WV, Friends Health Service, Maternal Health Clinic.

[116] Memorandum of Dr. Squier's Trip to Logan, West Virginia May 12, 13, 14, 1936, May 19, 1936, AFSCA, Rehabilitation, Logan County, WV, Friends Health Service, General.

[117] Ibid.

the economic condition."[118] Despite their differing views of the study's goals, the FHS workers were able to work cooperatively with the outside contraceptive advocates to perform the trial.

The FHS hired Alice Beaman, a public health nurse from Philadelphia, and sent her to Logan County in January 1936. Squier expressed concern at Beaman's hiring because she was not acquainted with the standards and methods of the ABCL and NCMH and had not been approved by these groups. He feared that her early assignment to Logan County before the actual study was to begin would "likely result in serious difficulty at the time of transition." Gamble defended the choice by explaining that she was on probation for three months and could be replaced before the study began if her work was unsatisfactory. He praised her "quiet, unaggressive personality" as "an asset in clinic work because it would be a safeguard against antipathy or resentment among the psychologically delicate people among whom she would work." Although Gamble regarded Beaman as qualified and competent to pursue the work in Logan County, he continued to express reservations about the ability of residents to participate in the trial.[119]

At first, Beaman visited physicians in outlying coal camps and informed them of the upcoming trial. She also conducted clinics under physician supervision and provided contraceptive jelly to indigent, married women. During this period, Beaman became increasingly convinced that the system of contacting women in the coal camps and then scheduling them for a visit with a physician in a clinic was cumbersome and responsible

[118] Winnifred Wenke to Homer Morris, September 23, 1935, AFSCA, Coal Area Projects, Logan County West Virginia, Friends Health Service, Maternal Health Clinic.

[119] Memorandum on Miss Alice Beaman, December 11,1935, CGP, Box 44, Folder 725.

for the lack of positive response from area women.[120]

Beaman disagreed with Squier on this issue, complaining, "Dr. Squier seems to think that all we have to do is open clinics in order to have all the patients we want."[121] This concern is reflected in her logbook throughout this period. At times, she simply ignored the policy and provided the contraceptive jelly without physician approval. In February 1936, she described one such incident, "Gave Obegyne (contraceptive jelly) set to the woman who has the imbecile son…though it is not general policy."[122] She also foresaw a potential problem with requiring women to return to the clinic location for refills and expressed concern that the study could be jeopardized if women could not receive their supplies in a timely fashion to ensure continuous use.[123] As she became familiar with the local residents, Beaman demonstrated her increasing knowledge of the population and the unique problems of providing contraceptive care in an impoverished rural community.

Eventually, Beaman convinced the study coordinators of the futility of the clinic system. When the study officially began in June 1936, Beaman visited potential patients in their homes and provided them with the necessary supplies. Beaman's perseverance and adaptability allowed the FNS to complete the trial successfully and provided a

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[120] Alice Beaman to Homer Morris, Reports, January 1936 to June 1936, AFSCA, Friends Health Service, Correspondence.

[121] Alice Beaman to Homer Morris, Report, March 24, 1936, AFSCA, Friends Health Service, Correspondence.

[122] Alice Beaman to Homer Morris, Report, February 4, 1936, AFSCA, Friends Health Service, Correspondence.

[123] Alice Beaman to Homer Morris, Report, February 7, 1936, AFSCA, Friends Health Service, Correspondence.

template for the conduct of future trials.[124] It is difficult to imagine that enough patients would have been registered under the original schema.

By all accounts, Beaman performed her duties with diligence and competence. Despite his early doubts, Squier soon became her staunch supporter. By 1936, he described her as exhibiting "excellent intelligence and diligence" and recommended that she receive an increase in her salary and extra vacation time.[125] He later credited her with the program's success, explaining, "she is the one that makes the West Virginia project worth while."[126]

Beaman excelled at her work, but she frequently expressed doubts about her performance. Early in her stint in Logan, she described her difficulty in "getting adjusted" but praised the area as "a great location for learning spiritual lessons." She does not appear to have been a Quaker, unlike most of her coworkers at the FHS. Her political leanings are also unclear, but she may have given a hint when she described the local miners as the "proletariat" although there is no further use of leftist terminology in her letters.[127]

Although Beaman usually portrayed her patients sympathetically, she also lapsed into the derogatory eugenic rhetoric commonly used by outside reformers in Appalachia.

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[124] Alla Nekrossova MD, "Home Visits in Isolated Communities," *Birth Control Review* IV, no. 8 (May 1937): 2-4; Katherine Faville, "The Nurse and Family Planning," *Birth Control Review* IV, no. 8 (May 1937): 5.

[125] Raymond Squier, MD to Homer Morris, Letter, July 22, 1936, AFSCA, Friends Health Service, Correspondence.

[126] Clarence Gamble, MD to Alice Beaman, Letter, November 2, 1936, AFSCA, Friends Health Service, Correspondence.

[127] Alice Beaman to Homer Morris, Letter, May 10, 1936, AFSCA, Friends Health Service, Correspondence.

During a period of exceptional strain, she described her patients as "all this sub-standard humanity that I have to look at and work with all the time."[128] On another occasion, she encountered a woman who was unable to provide the ages of her children during a survey in an abandoned coal camp. She described this woman and her husband as "low-grade people" and "very poor stuff" and recommended that they be sterilized to prevent further pregnancies.[129]

The Logan County contraceptive trial ended in August 1939. Over the three-year course of the study, 1,345 women were entered into the study and agreed to use the contraceptive jelly.[130] The birth rate decreased by 41% among the study participants.[131] Although Clarence Gamble reportedly considered the trial an "unqualified success," others were less enthusiastic about the outcome.[132]

Gilbert Beebe argued that the decrease in birth rates during the trial resulted solely from women diligently practicing contraception for the prescribed period. In his analysis, the actual contraceptive used was no more effective than other methods already used by women in Logan County. This analysis was undoubtedly complicated by the difficulty encountered in interpreting data that was flawed by the use of other, non-prescribed contraceptive jellies by the research subjects. Beebe concluded that none of the currently available methods of contraception were effective enough to be considered

[128] Alice Beaman to Homer Morris, Letter, April 9, 1937, AFSCA, Friends Health Service, Correspondence.

[129] Alice Beaman to Homer Morris, Report, September 29, 1936, AFSCA, Friends Health Service, Correspondence.

[130] Beebe, *Contraception and Fertility,* 50.

[131] Ibid.,132.

[132] Reed, *The Birth Control Movement and American Society,* 250.

reliable and effective forms of birth control and that new methods of contraception were needed before appreciable progress could be made among rural populations.[133]

Following the conclusion of the trial, a minor controversy arose over whether to continue to provide contraceptive jelly to the participants. Raymond Squier advocated for a system whereby women could continue to receive a supply of contraceptive jelly upon request.[134] Gamble's position on this issue was contradictory. In a letter to Beebe, he argued that "it seems important to continue the sociological experiment."[135] In contrast, he also claimed that once the study was completed, it was the responsibility of the sponsors to withdraw funding and cease distribution of contraceptives.[136] The NCMH report on the Logan County Study clearly defined the study purpose as "experimental, not service."[137] The eventual resolution of this problem is unknown; it is likely that no follow-up system was ever created because the patient demand for the contraceptive jelly declined rapidly after the conclusion of the trial.[138]

The Logan contraceptive study was important for several reasons. It provided a template for future contraceptive studies among poor, rural women in the United States and abroad. Because a nurse successfully conducted the clinical portion of the trial with minimal physician involvement, the study demonstrated the efficacy of the home visit

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[133] Beebe, *Contraception and Fertility*, 153.

[134] Raymond Squier, M.D. to Mr. William J. Clothier, February 14, 1939, AFSCA, 1939 Correspondence.

[135] Clarence Gamble, M.D. to Gilbert Beebe, March 29, 1939, CGP, Box 44, Folder 727.

[136] Schoen, *Choice and Coercion,* 42.

[137] "Report on the Field Project in Logan County, West Virginia," May 22, 1939, CGP, Box 44, Folder 727.

[138] Winnifred Wenke to Homer Morris, May 17, 1939, AFSCA, Correspondence 1939.

methodology for future trials. This methodology allowed for trials to be conducted more economically and for more women to be enrolled in these studies. Clarence Gamble viewed the success of this method as a vindication of his original proposal for the trial when he claimed, "further liberation of the nurse will follow gradually. Logan, I am sure will furnish a valuable precedent for the entire country."[139]

The Logan Study also demonstrated that indigent, rural women could successfully participate in a contraceptive trial and effectively use the prescribed contraceptive method. Presumed barriers of intelligence and education levels were not sufficient to render the trial invalid, as some contraceptive advocates feared. The expected opposition from religious groups never materialized and rarely presented a problem for the researchers in the field.[140] Although it appears that Gamble interpreted the Logan results as a vindication of his methods and choice of contraceptive techniques, the results were equivocal at best. Never deterred by data that contradicted his beliefs, Gamble moved on to Berea, Kentucky, to conduct his next trial to demonstrate the efficacy of his methods

## "Better Health for Mountain Mothers": The Berea Contraceptive Trial

The Mountain Maternal Health League (MMHL)[141] was established in 1936 to perform contraceptive studies in the Appalachian counties around Berea, Kentucky. Outside interests provided the original impetus and funding for the organization, but the MMHL rapidly evolved into an indigenous Appalachian organization dedicated to

[139] Clarence Gamble to Winifred Wenke, March 12, 1936, Clarence Gamble papers; Quoted in Reed, *The Birth Control Movement,* 250.

[140] Beebe, *Contraception and Fertility,* 166.

[141] The organization was originally known as the Kentucky Maternal Health League. The name was changed to Mountain Maternal Health League in 1938. I have chosen to use Mountain Maternal Health League throughout this paper for clarity.

providing contraceptive services and education to women in southeastern Kentucky. Because women who lived and worked in Appalachia created and sustained the MMHL, it differed in some crucial respects from the typical reform enterprise that was created and supported by outside interests.

As in Logan County, Dr. Clarence Gamble provided the motivation for the creation of the MMHL. His interest in Kentucky can be traced to his relationship with Dr. William Hutchins, then president of Berea College, and Gamble's previous experience promoting contraception in Appalachia.[142] Gamble's first introduction to Berea College and Appalachia occurred in 1927 when he discussed the history and mission of the college with Hutchins. Hutchins explained the economic deprivation suffered by area residents and convinced Gamble of the role that practical education could play in alleviating these problems. Berea's mission to educate southern mountain youth and its programs for instructing students about business and business ethics impressed Gamble. He donated stock to the college to create an endowment to provide small loans for deserving students needing emergency funds for essential items.[143]

Berea was renowned as a center of progressive thought and activism in Appalachia. Abolitionists founded its eponymous college in 1855 and advocated for and provided interracial education until Kentucky outlawed the practice in 1904.[144] After the state banned the practice, Berea College focused on Appalachian uplift and reform efforts

[142] Williams, *Every Child a Wanted Child,* 121.

[143] Ibid.

[144] The Day Law, proposed by legislator Carl Day of Breathitt County, prohibited interracial education in Kentucky. It was passed by the state legislature and signed by Governor J.C.W. Beckham in 1904. The law targeted Berea College since no other institution in Kentucky provided education in a racially integrated setting. Berea College opposed the law but eventually lost its case in the US Supreme Court (*Berea College v. Commonwealth, 1908).*

and became a center for the nascent Appalachian reform movement.[145] The Kentucky State Conference of Social Work held its annual conference there in 1933, and contraception was featured on the agenda as a mechanism for combatting poverty and overpopulation in the region. Dr. J.W. Hatcher, a sociologist at Berea College, acknowledged his practice of lecturing to students about various birth control techniques. An unidentified attendee at the conference summarized the proceedings claiming, "those attending the conference heartily expressed themselves in favor of birth control since there is such dire distress throughout Kentucky generally."[146]

In contrast to his previous experience in West Virginia, Gamble found local partners in Berea eager to create an organization to perform contraceptive studies. In March 1936, he contacted Hutchins with an offer of funding to conduct a demonstration project in the area.[147] Gamble arranged for Hutchins to meet with his representative, Phyllis Page, at the Conference of Southern Mountain Workers meeting in Knoxville, Tennessee.[148] Demonstrating his frustration with his previous efforts in West Virginia, Gamble argued for a local organization to supervise the proposed study because he

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[145] Shannon H. Wilson, *Berea College: An Illustrated History* (Lexington: The University Press of Kentucky, 2006), 1-6.

[146] Report of the 21st Assembly of the Kentucky State Conference of Social Work, October 13-14, 1933, Margaret Sanger Papers, Manuscript Division, Library of Congress, Washington, D.C., Box 143, Reel 92.

[147] Clarence Gamble MD to Dr. William Hutchins, March 21, 1936, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 14, Folder 267.

[148] The Conference of Southern Mountain Workers was a philanthropic organization dedicated to researching, publicizing, and providing solutions to the problems experienced by Appalachian residents. The council maintained offices at Berea College and published a journal, *Mountain Life and Work.* The group changed its name to the Council of the Southern Mountains in 1954 and disbanded in 1989. For further information on the Conference if Southern Mountain Workers see, David E. Whisnant, *Modernizing the Mountaineer: People, Power, and Planning in Appalachia*, Rev. ed. (Knoxville: University of Tennessee Press, 1994), 3-39.

wanted local contacts to "maintain contact with the worker easily, and to furnish knowledge of local conditions." Gamble also requested that the leaders of the new organization should be Kentuckians to "furnish a background of respectability for the organization."[149] Clearly, Dr. Gamble saw the benefits of local organizations in performing these studies and saw Berea as a prime location for garnering the necessary interest in his enterprise.

Gamble's advocacy for local control of the new organization ran counter to his usual procedure in organizing birth control studies. He usually required local organizations to allow him to exercise control over the projects he sponsored in exchange for the funds he donated.[150] Gamble also often declined to work cooperatively with national birth control advocacy groups, choosing instead to maintain his freedom of action by donating a portion of his fortune to the cause.[151]

The differences between the two Appalachian sites Gamble chose for his contraceptive studies are striking. Logan was a poor, isolated town beset by labor strife and dependent on the declining coal industry. Berea, in contrast, was an educational center, and its economy was based around the college and agriculture. There was no significant coal mining in the area and no history of labor discord. Although Logan and Berea were different, the patients served by each organization were similar in their socioeconomic, religious, and racial makeup.

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[149] Clarence Gamble MD to Dr. William Hutchins, March 21, 1936, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 14, Folder 267.

[150] Reed, *The Birth Control Movement and American Society,* 257.

[151] Wilma Dykeman, *Too Many People, Too Little Love: Edna Rankin McKinnon: Pioneer for Birth Control* (New York: Holt, Rinehart, and Winston, 1974), 76.

To encourage his participation in the proposed trial, Page approached Hutchins in Knoxville and discussed Gamble's proposal with him there. She also introduced him to conference attendees from Logan County, West Virginia. They described the problems they had encountered in Logan County and advised Hutchins on the feasibility of a study in Berea. Page impressed Hutchins with her knowledge of the issues, and he invited her to accompany him back to Berea to meet "various people and a doctor from the possible outpost."[152]

In Berea, Page met with interested local parties and expressed surprise at the level of "appreciation for the need of birth control in the Kentucky mountains." She spent four days there, meeting with local "community leaders" including delegations from the medical community, church groups, the Parent Teacher Association, and local businessmen. Page did not meet any potential local patients and betrayed her biases, describing them as "poor" and "shy and difficult to approach unless one knows 'their language'."[153] Despite her misgivings concerning Appalachia and its residents, Page recommended that Gamble proceed with plans for a contraceptive trial in Berea, with Gamble providing funds to hire a nurse and equip her with an automobile.[154]

Local organizers, described as "a group of fifteen people interested in health work for Mothers of the under-privileged class" met on March 30, 1936, to organize a committee to support Dr. Gamble's suggested plans. Page presented Gamble's offer of

[152] Phyllis Page to Clarence Gamble MD, March 25, 1936, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 194, Folder 3066.

[153] Organization of Contraceptive Services: Procedures Adapted to Rural Areas and to Public Health Programmes, 1937, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 14, Folder 270.

[154] Phyllis Page to Clarence Gamble MD, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 14, Folder 267.

funding a nurse's salary for one year, an automobile and automobile expenses, and necessary clinical and medical materials. Gamble and Page expected the nurse to visit patients in their homes to provide contraceptive instruction and materials. The nurse was also required to keep careful records and to provide these to Dr. Gamble for use in his clinical studies. The meeting concluded with a unanimous vote to approve the plan as presented by Page.[155]

The group of local residents that constituted the Kentucky Maternal Health League (KMHL) in 1936 was drawn from the educated elite of the Berea community. The original Executive Board consisted of nine women and one man for a total of ten members. All of the board members were residents of Berea and were described as college professors, college employees, wives of professors, or wives of local businessmen. A Medical Advisory Board was also created; its membership consisted of local physicians and nurses.[156] The leadership of the MMHL was notable for its ties to the local community and the predominance of female board members.

The Berea group immediately began a search for a qualified nurse and hired Lena Gilliam in June 1936. Gilliam, a native of nearby Annville, easily met the essential qualifications of professional credibility and Kentucky ancestry. Gilliam was a graduate of a prestigious nursing training program in New York and wanted to come home to Kentucky to pursue her career in more familiar surroundings. Gamble arranged for Gilliam to meet with birth control organizations in New York before she came to

[155] Ledger titled Mountain Maternal Health League Minutes and Original Constitution, March 30, 1936, Mountain Maternal Health League Records (MMHLR), Berea College Special Collections & Archives, Berea, Ky. Box 1, Folder 1-4, p17.

[156] Ibid.

Philadelphia to meet him. She then journeyed to Logan, West Virginia, and spent two weeks there working with Alice Beaman, learning about the jelly contraceptive technique and training to perform similar duties in Kentucky.[157]

Gilliam came from a large, impoverished family and experienced the depredations of poverty and pregnancy through her mother's death in childbirth when Lena was only sixteen years old. Previously, her mother had forced her to forgo a scholarship to Annville Institute because she needed her daughter to stay home to help care for her numerous younger siblings. When Gilliam questioned her mother about her frequent pregnancies, she replied, "I've already had more than I wanted…but what can I do – men being what they are." After her mother's untimely death, Gilliam became the caregiver for ten younger children. Eventually, a family friend arranged for her to attend nurse's training in New York. Although Gilliam began her training with the goal of becoming a midwife, she "learned in New York, though, that mothers really could be taught how to space their families."[158] Armed with her childhood experience and her training in New York, Gilliam seemed an excellent hire for the new organization.

Although Gilliam proved to be an outstanding representative of Dr. Gamble's interests, some of his national collaborators questioned her suitability for the task at hand. Their opposition centered on doubts that a native Appalachian nurse could master the complex research protocols and questionnaires required to complete the study. Dr. Gilbert Beebe documented his initial concerns about Gilliam in a letter to Gamble. Beebe

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[157] Clarence Gamble MD to Lena Gilliam, June 6, 1936, CJG to Lena Gilliam 6/6/36, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 14, Folder 267.

[158] Lena Gilliam, "A Million Dollars for Birth Control," *The Survey,* (September 1937) MMHLR, Berea College Special Collections & Archives, Berea, Ky., Box 11, Folder 1.

expressed “an early skepticism concerning our ability to get the detailed information demanded by the history forms we planned to use.” Despite his apparent misgivings, Beebe became convinced of Gilliam’s potential by her early performance when he noted, “I believe it is becoming increasingly clear that she is going to be able to handle well a group large enough to permit us to gather some real information about the method.”[159]

The Medical Advisory Board of the MMHL quickly drafted a set of instructions for “Miss Gilliam about the ethics of handling patients.” Because there was great concern about the new project engendering hostility from area physicians, the instructions carefully delineated Gilliam’s role in dealing with the medical community. She was required to obtain approval for her clinical activities through either the patient’s private physician or the local public health physician. The directives prohibited the nurse from working with patients without physician assent, requiring that “in all cases the nurse is to get approval from a doctor in the community before she goes ahead and gives advice and material.”[160]

It is unclear whether the Medical Advisory Board enacted these limitations to satisfy legal requirements or to constrain Gilliam’s clinical activities, but it is apparent that she never strictly followed these guidelines. She described her understanding of the restrictions as “among the married mothers of the underprivileged group, the Committee of Physicians allows me to use my judgment in selecting those whom I shall instruct.”[161]

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[159] Gilbert Beebe to Clarence Gamble MD, September 3, 1936. MMHLR, Berea College Special Collections and Archives, Berea, Ky. Box 2, Folder 2-2.

[160] Medical Advisory Board of the Kentucky Maternal Health League Meeting, July 16, 1936, MMHLR, Berea College Special Collections & Archives, Berea, Ky. Box 1, Folder 1-4, pp 37-39.

[161] Organization of Contraceptive Services: Procedures Adapted to Rural Areas and to Public Health Programmes, 1937, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 14, Folder 270, p4.

If area physicians were cooperative, Gilliam worked closely with them, but she avoided those that opposed her contraceptive efforts and continued her work without their assistance and despite their opposition.

Following the initial period of training and preparation, the Berea contraceptive trial proceeded as planned. Gilliam visited 500 families and provided supplies to 380 mothers in the first year. Besides her work in the Berea area, she also visited Sevierville, Tennessee, and Harlan, Kentucky. She arranged with local physicians in those areas to distribute supplies and keep records for Dr. Gamble. Consistent with the experience of the Logan trial, Gilliam apparently encountered little opposition during this early period despite her concerns about resistance from religious groups.[162]

In contrast to Logan County, where the trial was conducted without interference from a statewide birth control organization, the Berea group dealt with alternating interference and cooperation from other birth control advocates in Kentucky. The Kentucky Birth Control League (KBCL) was created in Louisville, Kentucky, in 1933 as an affiliate of the American Birth Control League (ABCL).[163] Less than three months after its inception, the Executive Board of the MMHL contacted the KBCL to foster cooperation between the two organizations. The KBCL sponsored some birth control activities in territories that overlapped those served by the Berea group, and the MMHL Board wished to ensure that no conflicts arose between them.[164] Although the two groups remained in cordial contact for years, their relationship was often strained by their

[162] Williams, *Every Child,* 125-126.

[163] For further information about the KBCL see Judith Gay Myers, "A Socio-Historical Analysis of the Kentucky Birth Control Movement, 1933-1943" (PhD diss., University of Kentucky, 2005), 112-113.

[164] Elliott Baker letter to Jean Tachau, October 10, 1936, Family Planning in Kentucky Collection, Kentucky Historical Society Library, Frankfort, KY, Box 2, Folder 1.

differing views on providing birth control services in Kentucky.

The KBCL followed a strict policy of providing birth control services only under the direct supervision of a physician. In her *Memoir,* Jean Tachau, the President of the KBCL, wrote in favor of physician control by claiming that "Margaret Sanger, herself a nurse, believed in birth control methods which would be strictly tied to 'doctors only'." Tachau contrasted this view with the idea of "another movement, which claimed that methods already known could be dispensed by nurses, social workers, aides, etc., within or without the law. This was termed 'Voluntary Motherhood', but it never got off the ground in the USA."[165] Tachau's bias toward a professionalized, physician-controlled contraceptive program contrasted and conflicted with the plans of the MMHL.

Located in Louisville, the urban center of Kentucky, the KBCL had the luxury of requiring physician involvement in birth control clinics. There were ample numbers of physicians available, and the proximity to the state's center of medical education and political power provided a powerful incentive for their stance. Tachau also feared a backlash from the autocratic leader of the State Board of Health, Dr. Arthur McCormack. McCormack adamantly opposed the easy availability of contraception. At the 1938 Southeastern Surgical Conference, held in Louisville, he railed against an exhibit on birth control. He argued that if contraception were readily available, "only poor people would have babies and the State and Nation would deteriorate physically and mentally."[166] In

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[165] *Memoir*, Jean Brandeis Tachau, 1970-1978, unpublished manuscript, University Archives and Records Center, University of Louisville Libraries, Louisville, KY, quoted in Judith Gay Myers, "A Socio-Historical Analysis of the Kentucky Birth Control Movement, 1933-1943" (PhD diss., University of Kentucky, 2005), 112-113.

[166] "Birth Control Film Target: McCormack Raps Exhibit at Surgical Meet," *Louisville Times,* April 25, 1938, Family Planning in Kentucky Collection, Kentucky Historical Society Library, Frankfort, KY, Box 2.

this statement, McCormack made a common eugenic argument in opposition to birth control, but other statements he made revealed his primary objection to the initiation of a birth control program. Dr. McCormack was a fierce advocate for the private practice of medicine, controlled by physicians and unhindered by government interference or regulation. He contended that any form of a state-sponsored birth control program would erode physician autonomy and permit government intrusion into medical practice.[167]

The arguments over the necessity of physician involvement in contraceptive prescribing mirror more significant, ongoing discussions about the physician's role in American society. As medical education and practice became more scientific and standardized during the early twentieth century, physicians became more politically powerful. They wielded much of this power to discredit and eliminate practitioners of rival medical philosophies to ensure that trained, allopathic physicians dominated American medical practice. Physician groups led the offensive to suppress traditional practitioners, such as lay midwives, and subordinate nursing practice to physician authority. This effort had the secondary effect of masculinizing American medicine as most physicians were male while many traditional practitioners and most nurses were female.[168]

The trend toward professionalization and masculinization had significant consequences for the birth control movement. Before World War I, female reformers, such as Margaret Sanger, dominated the American birth control movement. After the

[167] Deborah McRaven, "Birth Control Women: Controlling Reproduction in the South, 1933-1973" (PhD diss., University of Kentucky, 2006), 224.

[168] James H. Cassidy, *Medicine in America: A Short History* (Baltimore: Johns Hopkins University Press, 1991), 86-96.

war, Sanger and others developed alliances with the male-dominated medical establishment. This evolution gave male physicians increasing control over the birth control movement. Feminist scholars have decried this development, arguing that Sanger's willingness to work with male medical professionals betrayed the movement's feminist and radical underpinnings and increasingly divorced the issue of birth control from the broader women's rights movement.[169]

Despite a perceived need to maintain cordial relations with the KBCL, the MMHL leaders respectfully declined formal affiliation with the statewide organization. They offered continued cooperation in the form of a "united front" in matters of public interest and agreed to a free interchange of ideas and data between the groups. Otherwise, they declined further ties because they desired "perfect freedom to continue the experiment with the …jelly we now use, distributed by a registered nurse under the direction of a medical board." The MMHL also asserted its freedom to raise funds "in Kentucky" and to provide its services in communities that requested them.[170]

The organization underwent radical changes following the completion of the original contraceptive jelly trial. Pursuant to his original plan, Dr. Gamble decreased his funding to the Berea group by two-thirds after the first year, expecting them to raise their own funds to support and expand the organization. Lena Gilliam married in 1938 and left the MMHL. Her sister, Sylvia Gilliam, was quickly hired, and she assumed her sister's duties in November 1938 despite the financial concerns that dominated the organization

[169] Linda Gordon, *The Moral Property of Women*; Elizabeth Fee and Michael Wallace, "The History and Politics of Birth Control: A Review Essay," *Feminist Studies* 5, no.1(Spring 1979): 208.

[170] President MMHL to Jean Tachau, January 22, 1938, MMHLR, Berea College Special Collections & Archives, Berea, Ky. Box 1, Folder 1-13.

during this period. The group pieced together a minimal budget based on Gamble's declining donations, with the remainder secured through "faith and voluntary contributions."[171]

The MMHL attempted to expand its contraceptive program in Eastern Kentucky despite the fiscal adversity it faced. They formed a loose partnership with the KBCL to support Sylvia Gilliam to provide contraceptive services in Harlan County. Like Logan County, West Virginia, Harlan County was beset by grinding poverty and violence between labor activists and coal mine operators. In his classic study of Appalachia, *Night Comes to the Cumberlands,* Harry Caudill described the county as "a symbol of operator resistance and union resolution" where "the battle … was protracted longer than anywhere else."[172] In spite of these obstacles, the MMHL began providing contraceptives to Harlan County mothers and attempted to form alliances with local physicians and coal operators to further their work there. While their only nurse was occupied in Harlan County, the MMHL patients in the Berea area were supplied by mail order from the home office, with the orders being filled by volunteer student workers from Berea College.

The attempt to create a sustainable program in Harlan County eventually failed due to opposition from local physicians and coal operators. Local mothers exhibited a desire for contraceptive services, and more than five hundred were served during the life of the program. Although some individual physicians were cooperative, the MMHL decided that "promotion of birth control through the local practitioner is a slow and ineffective way of working" because physicians are "either timid in introducing the

[171] Better Health for Mountain Mothers, MMHLR, Berea College Special Collections & Archives, Berea, KY, Box 10, Folder 8.

[172] Caudill, *Night Comes to the Cumberlands,* 199.

matter for fear of getting into trouble …or quite without understanding of the ways of the humble in cabin and crowded quarters."[173] Dr. Gamble's representative Edna MacKinnon faced a chilly reception in Harlan when she inquired at the Harlan County Coal Operators Association headquarters to obtain information about local coal operators. The clerk informed her that no information about the operators was available.[174]

Although there is no evidence that the Harlan County coal operators were opposed to contraception, they were opposed to outside interference in the area. The MMHL may have discovered another cause for physician hostility when they attempted to rally support for their program by presenting their case to the medical officer of the Wisconsin Steel Company, which owned several mines and company towns in Harlan County. The letter indicates that the company paid each physician a substantial fee for each delivery performed. By decreasing the number of deliveries, the MMHL argued that their program would result in cost savings to the company.[175] There is no indication that they considered the converse proposition that coal company physicians were hostile to providing contraceptive services because a decrease in deliveries resulted in a direct reduction in their incomes without equivalent compensation from the contraceptive program.

Unlike the prior experience in Logan County, the end of the Berea trial did not mark the demise of the MMHL. As a provider of women's and reproductive health

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[173] Berea to Harlan County for Maternal Health, undated, MMHLR, Berea College Special Collections & Archives, Berea, Ky. Box 7, Folder 15.

[174] Edna McKinnon to Clarence Gamble MD, January 25, 1941, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA Box 14, Folder 283.

[175] President MMHL to Mrs. Gray, undated, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 14, Folder 282.

services, the MMHL was undoubtedly a success, but it differed from other Appalachian health reform enterprises in four important ways. First, the MMHL avoided the egregious fundraising practices used by other groups. Although the League was constantly working to provide financial stability for their enterprise, their fundraising occurred on a local and regional scale, and they avoided the stereotypical depictions of Appalachian residents that were the staples of similar efforts in other groups.[176] Indeed, some of their early fundraising appeals depicted the poverty of their patients, but they avoided references to feuding, hereditary degeneracy, and feeblemindedness that were seen in other groups' fundraising literature. It can be reasonably argued that the MMHL paid the price for their restraint, as their ability to recruit donors and raise funds was limited compared to their contemporary colleagues in Appalachian reform.

Second, the MMHL decided to use local employees to provide their services in the community. The employment of local workers was not common among these reform groups and contrasts them against other, similar groups. The Friends Health Service employed outside nurses during the Logan County trial. The Frontier Nursing Service never hired Appalachian midwives throughout this period. Some residents were hired for menial jobs, but no local resident held a position of authority in the organization until after the death of Mary Breckinridge in 1965. The MMHL preferentially recruited Appalachian nurses because they felt that this cultural tie between nurse and patient helped to forge a bond that allowed the nurse to provide more effective services. This policy began with the hiring of the first nurse, Lena Gilliam, and continued throughout

[176] What We Have Accomplished, undated pamphlet, Mountain Maternal Health League Records, Berea College Special Collections & Archives, Berea, KY, Box 12, Folder 2; Better Health for Mountain Mothers, MMHLR, Berea College Special Collections & Archives, Berea, KY, Box 10, Folder 8.

the organization's history.

This preference for Appalachian nurses merits comparison with Margaret Sanger's birth control outreach to southern blacks. In 1939, the BCFA proposed birth control trials among black southerners and christened this plan the Negro Project. Because blacks were felt to be culturally distinct from whites and were known to be suspicious of white efforts to control their population, Sanger suggested that black workers perform the proposed trial under the ultimate supervision of the BCFA. She also planned to recruit black ministers to help with patient recruitment and retention. This project has been the focus of intense scholarly scrutiny. It has been alternately interpreted as either proof of Sanger's racist and genocidal designs on American blacks or as a pragmatic attempt to reach a group of people who needed birth control services but were woefully underserved by existing programs. As with much scholarship involving Sanger, the chosen interpretation seems to reflect more on the political leanings of the scholar and less on the evidence presented.[177]

Although the MMHL's preference for local workers shared a common basic ideology with the Negro Project, it differed in both degree and substance. The MMHL served Appalachian patients that were almost uniformly white: the differences between these patients and the MMHL leadership reflected class, economic, and educational distinctions. There was no mention of race as an important factor in patient selection, and patients of both races were entered in the trial. However, the data was segregated

[177] Dorothy Roberts, *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty* (New York: Pantheon Books, 1997), 76-79; Angela Franks, *Margaret Sanger's Eugenic Legacy: The Control of Female Fertility* (Jefferson, NC: McFarland and Co., 2005), 43-47; Jean H. Baker, *Margaret Sanger: A Life of Passion* (New York: Hill and Wang, 2011), 251-253; Gordon, *The Moral Property of Women,* 234-236.

according to the race of the patient. The results of the Berea Study do not reflect the experiences of the black patients with "eighteen histories of Negroes having been omitted in the interest of homogeneity."[178] The small number of black patients in the trial suggests that black women were not targeted for inclusion in the trial, and there is no hint of racially targeted outreach activities in the historical record of the organization.[179]

Third, the MMHL benefitted from a group of female leaders that allowed the organization to negotiate the considerable socioeconomic and educational gap between themselves and the Appalachian women their organization served. Indeed, these women can be seen as a resource that Berea possessed that did not exist elsewhere in Appalachia. This resource was recognized in the eulogy for Nell Scoville Noll, one of the founders of the MMHL. Noll's eulogist claimed, "faculty wives were expected to stay home and become involved in college, church, and community work. This custom provided the college with a largely hidden resource---a kind of backlog of well-educated, highly skilled women---available for many important non-paying jobs."[180] The presence of this cadre of capable, educated, and motivated women set the MMHL apart from other Appalachian reform groups whose female leaders were often criticized for being "fotched

[178] Gilbert W. Beebe and Murray A. Geisler, "Control of Conception in a Selected Rural Sample," *Human Biology* 14, no.1 (February 1942): 2.

[179] Black women were 9.4% of the population of the target counties of Madison, Jackson, and Rockcastle in 1930. Only 4.5% of the study patients were black. This data refutes the assertion that blacks were targeted for the study to decrease their reproduction. It supports the opposite contention that blacks were ignored or excluded from many opportunities that were available to white women in the area. Other than these disparities in the data there is no evidence that blacks were excluded from the study itself although their data was not used in the final statistical tabulations. Census information obtained from; 1930 United States Census, http://mapserver.lib.virginia.edu/php/start.php?year=V1930#2 (accessed 2/10/16).

[180] An Appreciation of Nell Scoville Noll by Ora Wyatt Gunkler, March 12, 1986, MMHLR, Berea College Special Collections & Archives, Berea, KY, Box 1, Folder 1-7.

on" women.[181]

Finally, the MMHL demonstrated their difference in their interactions with outside reformers and their organizations. The MMHL chose to navigate an independent course despite their periodic strategic alliances with the KBCL and Dr. Clarence Gamble. The MMHL asserted its independence to create programs and provide services that they felt were necessary and appropriate for their community throughout this period. They resisted the dominant discourse of the KBCL and Dr. McCormack that insisted on strict physician control of contraceptive programs. In their resistance, they were able to provide services to patients that would have never been able to access equivalent care through the traditional model.

## Conclusion

The American birth control movement demonstrated an intense interest in Appalachia in the 1930s, but this interest waned by 1940. Two contraceptive trials were completed during this period, and the lessons learned were translated into further studies in other colonial domains, specifically Puerto Rico and India. Although information from the Appalachian trials informed and molded future studies, the participants disagreed on their interpretations of the data and its applicability to new trials.

Both the Logan and Berea studies demonstrated decreased birth rate among participants who diligently practiced the prescribed method. Always optimistic about his

[181] The term "fotched-on" describes outside reformers that came to Appalachia to reform and uplift the local residents. It is a somewhat derogatory term used to highlight the social, cultural, and educational differences between these women and the people they were determined to help. For further analysis see, David E. Whisnant, "Second-Level Appalachian History: Another Look at Some Fotched-On Women," *Appalachian Journal* 9, no. 2-3 (Winter-Spring 1982): 115-123.

research efforts, Gamble interpreted these results as proof of the efficacy of the contraceptive jelly used in the trials.[182] Others, including Gilbert Beebe, attributed the fall in the birth rate to the diligent practice of contraception regardless of technique. In this disagreement, Beebe appears to have been correct, as data from other trials shows similar effects independent of the contraceptive that was used.[183]

The two studies reached similar results, but their sponsoring organizations met very different fates. After the Logan trial ended, contraceptive use among the participants fell because no adequate system was ever devised to provide them with an ongoing supply of contraceptive jelly. Once Gamble and his associates withdrew their funding, the FHS lost interest in contraception but continued to offer other medical services to local residents. In contrast, the Berea trial led to the creation of the MMHL. Once the study was completed, the MMHL continued to function and slowly expanded its services. The MMHL made a lasting contribution to women's health in their service area and continued to provide contraceptive services until the 1980s, when Planned Parenthood assumed its activities.

Although contraceptive research was largely absent from the area for two decades, Appalachia again became a focus for researchers by the late 1950s. In an ironic twist, the Frontier Nursing Service, led by Mary Breckinridge, conducted an oral contraceptive trial in Leslie County, Kentucky. This trial brought the birth control research movement full circle. By returning to Appalachia for a study that contributed to the availability of an affordable, effective contraceptive, the area fulfilled the original

[182] Reed, *The Birth Control Movement,* 250.

[183] Beebe, *Contraception and Fertility*, 153.

vision of Clarence Gamble and his associates.

The following chapters will demonstrate that the Logan County and Berea trials provided essential templates for future trials in Puerto Rico and India. Despite the divergence of opinions about the results of these trials, birth control advocates accepted Gamble's optimistic interpretation and designed further studies based on these results. By ignoring the concerns of Gilbert Beebe and others, they ensured that the mistakes of the previous trials would be replicated in other colonial settings.

## Chapter Three: Puerto Rico

While the birth control trials in Appalachia were continuing, American birth control advocates looked elsewhere to expand their clinical trials**.** Although the final results of the previous studies were not available, Clarence Gamble and his colleagues sought to diversify their birth control program and test their evolving methods in a new series of studies. After claiming success in Appalachia, Gamble was eager to extend his studies and he found the conditions he sought to continue his work in Puerto Rico.

In many ways, Puerto Rico was similar to the familiar territory of Appalachia. The island was a possession of the United States, and as such, it operated under familiar American laws and governmental systems. Indeed, most important political and economic decisions were made in Washington, DC. The island's residents were US citizens, and they aligned with Appalachians on two important indices central to Gamble's plans: Puerto Ricans were very poor and very fertile. This combination of an impoverished population with a high birth rate again proved irresistible to Gamble and his collaborators.

Although there were considerable similarities between the two areas, the differences were also striking. Puerto Rico was a former Spanish colony that existed in a colonial relationship with the United States. While Appalachia had a primarily white European population, Puerto Rico's population was much more racially diverse. Puerto Ricans were of Spanish, African, and native origin, with many mixed-race individuals as were common in the Spanish Caribbean. Puerto Ricans spoke Spanish and a mélange of

local and African languages, although English and Spanish were the official languages.

The religious situation in Puerto Rico also presented a stark contrast with Appalachia. Appalachian residents followed various religious traditions, but most were Protestants with some Catholic influence from the immigrant community. The situation was very different in Puerto Rico. The vast majority of Puerto Ricans were Catholic, and the Catholic Church held enormous sway over political and social issues on the island. The Catholic hierarchy on the mainland watched events on the island closely and often intervened, particularly in matters of morality and reproduction. This configuration of religious loyalties complicated birth control advocacy on the island in ways that were never experienced in Appalachia.

Puerto Rico presented a unique challenge to mainland birth control advocates. Puerto Ricans were American citizens, but their society and culture were foreign to the American researchers who worked there. The need for contraceptive services appeared to be significant and growing, but new obstacles from political and religious authorities complicated any efforts to provide them. Even the island's geography confounded their work as the issue of overpopulation took on a new and ominous tenor in a territory with limited space and a burgeoning population. These challenges both propelled Puerto Rico's birth control movement and limited the possibilities for its success.

## Puerto Rico as an American Colony

In September 1493, Christopher Columbus made landfall on Puerto Rico, bringing the island to the attention of European explorers and colonists. Although Spanish explorers viewed the newly discovered land as a virgin wilderness ripe for

exploitation, it was already inhabited by 50,000 Taino Amerindians. These indigenous people lived throughout the island, growing crops, and hunting for survival. The arrival of Spanish colonists in 1508 marked the beginning of the end of the Taino culture on Puerto Rico in a pattern that was repeated on islands throughout the Caribbean. By 1530, the Taino presence on Puerto Rico was virtually obliterated, with Spanish colonists in firm control of the island.[1]

The first decades of Spanish rule over Puerto Rico saw the building of small Spanish settlements fortified to resist encroachment from other European powers and pirates. Spain viewed the island as an essential defensive outpost in the Caribbean with limited economic potential. Most of the resources and effort they expended on the island supported their military mission with little focus on economic development or settlement. This emphasis slowly changed as sugar and coffee became economically viable crops with a ready market in Europe and America. As the importance of agriculture grew, the need for a larger workforce became apparent. Since the native population had been almost entirely exterminated by this point, African slaves became the source of this labor.[2]

Although Spain attempted to create a gold mining industry on the island, the meager mines quickly played out and many of the colonists migrated elsewhere in the Caribbean. Those who remained built ginger and coffee plantations in the highlands worked by African slaves. Throughout the 16th and 17th centuries, Puerto Rico was under

[1] Irving Rouse, *The Tainos: Rise and Decline of the People Who Greeted Columbus* (New Haven: Yale University Press, 1992).

[2] Arturo Morales Carrion, *Puerto Rico: A Political and Cultural History* (New York: W.W. Norton, 1983), 9-24.

continuous threat of attack from other European powers and pirates. San Juan and its fortifications received most of Spain's political and economic attention because the island was viewed as a military outpost guarding Spain's extensive New World empire. The island's rural inhabitants, or *jibaros*, continued to cultivate their small farms and prospered by trading with merchants from other countries.[3] The continued split between the isolated colonial authorities in San Juan and the rest of the island's rural farmers defined Puerto Rican society during this period. The *jibaros* remained loyal to Spanish authority and responded to calls for military mobilization despite their frequent contact with foreigners and lack of interaction with the government in San Juan.[4]

During the 18th century, Spain instituted economic and political reforms that promoted closer ties between the royal government in Madrid and the colonial government in Puerto Rico. These reforms stimulated economic growth and agricultural production in an attempt to convert the island into a financial asset for the Spanish Empire. The success of these reforms led to rapid growth in the island's population through both natural increase and migration. By 1800, of the 155,000 residents on the island, about 10% were slaves of African origin.[5]

By 1850, Puerto Rico had developed a plantation economy centered on the production of coffee and sugar. These commodities were sold on the world market, but the United States was the most important customer for the island's agricultural output during this period. This trade was encouraged by colonial authorities, and it provided an

[3] Jibaros are Puerto Rican small farmers especially farmers in mountainous regions. This term carries a connotation of mountain dwellers as hillbillies.

[4] Carrion, *Puerto Rico,* 26-40.

[5] Ibid., 41-50.

essential source of income for Spain. In this period, the political environment was turbulent, with Spain attempting to maintain control of its Caribbean possessions amidst an onslaught of popular independence movements throughout their empire. By the end of the 19th century, Spain was in control of Puerto Rico, but the population remained restive despite Spanish concessions toward a more autonomous government for the island.[6]

The brief but decisive Spanish-American War ended Spanish rule on Puerto Rico. The military campaign on the island was concluded in three weeks in the summer of 1898 with few casualties and minor damage to island property. After the conclusion of hostilities, the Treaty of Paris formally ceded control of the island to the United States on December 10, 1898. The United States welcomed Puerto Rico as a strategic base in the Caribbean and a coaling station for the American fleet. The economic potential of Puerto Rico was less clear to its new masters.[7]

When the United States assumed control of Puerto Rico, the new owners quickly realized that most of the island's residents survived as poor subsistence farmers. No appreciable industry existed outside the sugar processing facilities that created the island's primary export. Most of the sugar cane crop came from large plantations worked by poor peasants employed in medieval conditions. American corporations saw the potential profits from an expanded sugar industry on the island, but this dream could not be achieved under the existing system of land ownership and sugar cane production. These corporations acquired large tracts of land from peasant farmers and replaced

[6] Ibid., 79-108.

[7] Ibid., 129-151.

diverse subsistence food crops with a sugar cane monoculture.[8]

This change in the island's agricultural economy had several harmful effects on the populace. It disrupted the traditional patterns of land settlement and left thousands of peasants landless and impoverished. Some of these workers found employment on the new sugar cane plantations, but much of the work was seasonal, and many workers became migrants in search of other work during the seasons when sugar work was not available. These changes also rapidly increased urban overcrowding and poverty as displaced workers moved from their farms to urban slums.[9]

After a short period of military control over the island, the United States instituted a civil government in 1900 under the auspices the Foraker Act.[10] This law gave all governmental authority to officials in Washington DC: it was roundly disliked by Puerto Ricans who resented its heavy-handed approach to governance. The Olmsted Act of 1909 expanded the President's power in insular affairs but provided little relief to Puerto Ricans seeking a measure of self-rule.[11] In 1917, Congress passed the Jones Act, which conferred US citizenship on all Puerto Ricans. This act also provided for more local control of government affairs, but the President appointed the governor and other important officials. The Jones Act also created government agencies that provided aid directly to the citizens in the areas of education, health and sanitation, and workplace

[8] Cesar J. Ayala, *American Sugar Kingdom: The Plantation Economy of the Spanish Caribbean, 1898-1934* (Chapel Hill: University of North Carolina Press, 1999), 17-9.

[9] Ibid., 178-82.

[10] Raymond Carr, *Puerto Rico: A Colonial Experiment* (New York: New York University Press, 1984), 37.

[11] Ibid., 51.

protections that island activists had long sought.[12]

American government officials and social reform advocates threw themselves into the task of remaking Puerto Rico in America's image. This process, known as Americanization, reflected mainland attempts to reform Puerto Rican society to impose American cultural and economic norms on the local population. Under this process, Puerto Ricans were to be educated and instructed to become loyal workers and productive members of American society.[13]

Although Americanization took many forms, the most significant work was done in the fields of health, sanitation, and education. American reformers saw Puerto Rico as a place of disease and rampant sickness compounded by poor nutrition and unhealthy living conditions. They organized efforts to control infectious diseases, improve nutritional standards, and encourage sanitation and public hygiene. Their attempts successfully met their public health goals, but many of the programs evoked resentment among the residents, limiting their effectiveness. None of these programs attempted to deal with the root problem of poverty and lack of opportunity among native Puerto Ricans.[14]

By the 1920s, the island was undergoing a rapid decrease in its mortality rate, partially attributable to the previous decade's public health programs. As the mortality rate declined, the birth rate increased slightly because healthier women were more likely to bring pregnancies to term, and infants had a better chance of survival. There was no

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[12] Ibid., 52-6.

[13] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception,* 10-11.

[14] Ibid.

compensatory decline in the fertility rate to counterbalance these factors. By 1920, Puerto Rico's population had increased to 1,300,000 with an annual rate of increase of 1.6%.[15] No economic reform program showed any promise of providing adequate growth to offset the steadily increasing need reflected in the rapid population growth. The combination of a growing population and an island with limited productive capacity provided a prime example of the Malthusian concept of overpopulation popularized four centuries before. Advocates of Malthusian ideas saw Puerto Rico as an essential laboratory to test their theories of overpopulation and development.

## "The Yankees Desire the Cage and not the Birds": Overpopulation in Puerto Rico

Sir Thomas Malthus, a British economist and clergyman, first advanced his theory of overpopulation in 1798. In his book, *An Essay on the Principle of Population,* Malthus outlined his concern that increasing human populations threatened humanity's survival. He theorized that human populations increase geometrically while needed resources, especially food, expand arithmetically. The disparity between these rates would eventually lead to a catastrophic collapse of the human population as the growth in population surpassed the availability of food. This rapid population growth could be checked by two types of restraints, positive and preventive. Positive checks are factors that shorten human lifespans such as war, famine, disease, and poor living conditions. Malthus described preventive checks as "moral restraints" and recommended marriage at an older age and celibacy. He did not recommend birth control as a preventive check and

[15] Jose L. Vazquez-Calzada, "The Demographic Evolution of Puerto Rico" (PhD diss., University of Chicago, 1964), 28.

often expressed strong opposition to its use.[16]

Malthus worked within a developing capitalist system during the early Industrial Revolution in England. This period was marked by increasing urbanization and a rapidly growing lower class that moved from agricultural areas to cities searching for industrial work. He attempted to explain the inequality engendered by this system by blaming the poor and their presumed failings for their poverty. He argued against the existing British Poor Laws because he felt that providing welfare support for the poor encouraged their reproduction and guaranteed that they would survive to reproduce and further exacerbate the problem.[17] He supported the Poor Law of 1834 because it limited the aid that poor families could obtain and required them to work to receive even this pittance.[18] Linda Gordon argued that Malthus' theories denied "a class (or gender or race) analysis of poverty" by focusing on overpopulation instead of problems with the "organization of labor and distribution of resources."[19]

Although Malthusian thinking informed the argument about overpopulation, the basic tenets of Malthus' theory have been discredited. Population has not continued to

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[16] Thomas Robert Malthus, *An Essay on the Principle of Population,* Reissue edition, ed. Patricia James (Cambridge: Cambridge University Press, 1989). For further information about Malthus and his theory of population see Robert J. Mayhew, *Malthus: The Life and Legacies of an Untimely Prophet* (Cambridge, MA: Belknap Press of Harvard University Press, 2014); Alison Bashford and Joyce E. Chaplin, *The New Worlds of Thomas Robert Malthus: Rereading the "Principle of Population"* (Princeton: Princeton University Press, 2016); and Gertrude Himmelfarb, "The Specter of Malthus," in *Victorian Minds* (New York: Alfred A. Knopf, 1968), 82-110.

[17] The Poor Laws were British laws enacted to attempt to provide relief for the poor. The first Poor Laws were enacted in the 16th Century and some form of these laws remained in effect until the creation of the modern welfare state after World War II. For further information about the Poor Laws see Lynn Hollen Lees, *The Solidarities of Strangers: The English Poor Laws and the People, 1700-1948* (Cambridge: Cambridge University Press, 1998); and George R. Boyer, *An Economic History of the English Poor Law, 1750-1850* (New York: Cambridge University Press, 1990).

[18] Gordon, *The Moral Property of Women,* 40.

[19] Ibid.

increase geometrically, and the increase in food production in the last century has outstripped the rise in population. Evidence for a decline in the birth rate was already available when Malthus published his work; France had seen a fertility decline associated with voluntary birth limitation since the late 1700s. Despite the failure of the basic theory, the corollary idea that overpopulation is the cause of poverty has survived and thrived and continues to inform the contemporary discourse of overpopulation.[20]

Neo-Malthusian thought emerged in England in the 1820s as a more optimistic interpretation of Malthusian population theory. Neo-Malthusians agreed with Malthus that population growth posed an inexorable problem, but they argued that there were ways to limit population growth and break the cycle. They advocated for the use of birth control and rejected the sexual puritanism of Malthus.[21] Although they challenged Malthusian nihilism, they continued to blame overpopulation for the presence and increase of poverty they saw around them. This early emergence of neo-Malthusian thought influenced the utopian movement in the United States but had little effect on England's birth rate during this time.[22]

Malthusian ideas influenced the emerging American birth control movement although

scholars disagree on the path taken by neo-Malthusian thought from its creation in England to its adoption by the American reform movement. Gordon asserts that the first-

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[20] Betsy Hartmann, *Reproductive Rights and Wrongs: The Global Politics of Population Control*, rev.ed. (Boston: South End Press, 1995), 14-5.

[21] Gordon, *The Moral Property of Women,* 42; E.P. Thompson *The Making of the English Working Class* (1963; repr., New York: Vintage Books, 1966), 776-7.

[22] Gordon, *The Moral Property of Women,* 44.

generation neo-Malthusians transmitted their ideas to the utopian movement in the United States through Robert Dale Owen's writings. These early reformers and radicals then spread their ideas about population and birth control to the American women's rights movement in the 1840s.[23] Other scholars assert that the contacts between Margaret Sanger and the Malthusian League brought about the transfer of neo-Malthusian ideas to the American birth control movement.[24] Although the precise mechanism of transmission is contested, the influence of neo-Malthusian concepts on the thinking of American birth control advocates is evident.

The Malthusian League was founded in London in 1877. Despite its somewhat misleading name, the League was the first organization to advocate for voluntary family limitation and birth control to combat poverty.[25] It promoted family limitation through publications and advocacy throughout the late 19th and early 20th centuries. In 1921, the League opened the first birth control clinic in Britain.[26] Chronically short of funds and riven by infighting, the League ceased operations in 1927.[27] Despite its short tenure, the Malthusian League had considerable influence on the American birth control movement.

Neo-Malthusian ideas spread rapidly from Europe to the United States in the early decades of the twentieth century. Margaret Sanger and others traveled in Europe and interacted with many of the luminaries of the European movement. When the American

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[23] Ibid., 45.

[24] Peter C. Engelman, *A History of the Birth Control Movement in America* (Santa Barbara: Praeger, 2011), 47, 150; Baker, *Margaret Sanger,* 97; Chesler, *Woman of Valor,* 180-2.

[25] Rosanna Ledbetter, *A History of the Malthusian League, 1877-1927* (Columbus: Ohio State University Press, 1976), xiii-xv.

[26] Ibid., 220-1.

[27] Ibid., 203-36.

Birth Control League was founded in 1921, neo-Malthusian language was included in its founding document. The "Principles and Aims of the American Birth Control League" contains language linking overpopulation to poverty and dependence and offers contraception to remedy these problems.[28] In 1922, Sanger spoke at the Fifth International Neo-Malthusian Conference in London. She was the first woman to chair a session at this conference, and her presence demonstrated her acceptance of neo-Malthusian ideas about overpopulation and poverty.[29]

By the 1920s, American birth control advocates had adopted neo-Malthusian ideas and sought support from other women's rights activists. During this period, suffragists dominated the American women's rights movement as they pushed for a constitutional amendment to ensure women the right to vote. Before the passage of the Nineteenth Amendment, Margaret Sanger had been unable to enlist the support of prominent suffragists because her ideas were seen as too revolutionary and radical. Suffragists feared that associating their cause with birth control would undermine their arguments and antagonize the public when they were making progress toward their ultimate goal. After the Nineteenth Amendment was ratified, groups such as the National Woman's Party and the National League of Women Voters continued to view birth control as too radical and too divisive to offer their support.[30]

Denied the support of mainstream feminist groups, Sanger turned to neo-

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[28] Margaret Sanger, *The Pivot of Civilization* (1922; repr., Scotts Valley, CA: CreateSpace Independent Publishing Platform, 2014), 81-2.

[29] Baker, *Margaret Sanger,*178.

[30] Dennis Hodgson and Susan C. Watkins, "Feminists and Neo-Malthusians: Past and Present Alliances," *Population and Development Review* 23, no. 3(September 1997): 475.

Malthusians and eugenicists to provide guidance and impetus to her movement. By 1922, she had clearly adopted their ideas when she described birth control as "a science which teaches that poverty and social evils can be greatly reduced by encouraging people to have small families."[31] This alliance between feminism, overpopulation, and eugenics would continue to inform the movement for the next two decades and provided its adherents with an ideological framework for the upcoming work in Puerto Rico.

Puerto Rico had long been advanced as an example of the problems wrought by overpopulation. The island possessed limited arable land, and the population had been growing rapidly since the 1800s. When the United States assumed control of the island in 1898, the population was 950,000. By 1930 the island's population had increased by more than 60% to 1,540,000. Much of this increase was due to a consistently elevated birth rate, but a decrease in mortality, especially infant mortality, also contributed to the problem.[32] American government officials and social reformers saw overpopulation as the basis for the island's poverty and the cause of its economic privation.

In 1930, the Brookings Institution published *Porto Rico and Its Problems,* a voluminous study of the island's social and economic situation at the onset of the Great Depression. The study concluded that overpopulation was one of the primary causes of Puerto Rico's chronic and worsening poverty. The authors claimed that:

> We now return to the basic problem of raising the standard of living in Puerto Rico…The growth of population lies at the root of Porto Rico's economic difficulties resulting in low wages, unemployment, and inadequate subsistence. Any program of economic betterment that is to prove permanently helpful must,

[31] Margaret Sanger, *The New Motherhood* (London: Jonathan Cape, 1922), 205-6.

[32] Vazquez-Calzada, "The Demographic Evolution of Puerto Rico", 28-9.

therefore, seek either to reduce population or to expand production.[33]

Although the Brookings Institution report made use of numerous contemporary sociological and demographic methods, the conclusions reached by its authors echoed the original Malthusian theory of the late eighteenth century. No consideration that Puerto Rico's problems were being exacerbated by the imposition of an economic system by their colonial masters was included in the final publication.

Because the mainland government readily accepted the discourse of overpopulation, it was easily applied to local conditions in Puerto Rico. Laura Briggs argues that the idea of moral failure among Puerto Rican women also bolstered this narrative. Before the birth control movement found purchase in Puerto Rico, venereal disease physicians, anti-prostitution crusaders, and moral reformers pathologized the island's women as immoral and promiscuous.[34] It was but a small step to blend this constructed image of Puerto Rican female sexuality with the discourse of overpopulation to encourage the entry of American birth control advocates into the island.

Puerto Rico's fractious political parties also contested the ideas around overpopulation. The Nationalist Party, supported by the Catholic Church, opposed contraception as a mainland idea, foisted on Puerto Rico in an effort to destroy the island's traditional, patriarchal family structure.[35] Nationalist politicians regularly inveighed against the evils of contraception; in some instances, they even accused mainland researchers of participating in a genocidal plan to exterminate the Puerto Rican

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[33] Victor S. Clark, *Porto Rico and Its Problems* (Washington: The Brookings Institution, 1930), 515.

[34] Briggs, *Reproducing Empire,* 8.

[35] Ibid., 76-81.

people. Less extreme partisans such as Pedro Albizu Campos, President of the Nationalist Party, worried that the US government was attempting to depopulate the island through contraception and emigration. Commenting on these concerns, Campos criticized the federal government's policies because "the Yankees desire the cage but not the birds."[36]

Left-wing political parties, exemplified by the Socialist Party, promoted birth control as a valuable tool to modernize the island and encourage economic growth. These parties viewed the Catholic Church as a reactionary institution that limited the island's possibilities of growth and advancement. Their rhetoric was less inflammatory and linked future prosperity to control of population growth and economic reforms. Socialists, in concert with mainland birth control advocates and local reformers, spearheaded the birth control movement in Puerto Rico.

### "A Raft Adrift": The Beginnings of Birth Control Research in Puerto Rico

The first attempts to establish birth control services in Puerto Rico began in the 1920s. Private organizations organized these efforts with little input from mainland advocates. These organizations were small and poorly funded, and they labored against a panoply of legal, economic, political, and religious obstacles. Although early efforts were ultimately unsuccessful, they laid the groundwork for more extensive and ambitious work in the future as federal government organizations attempted to build upon this embryonic infrastructure.

The first campaign to promote birth control on the island began when the Socialist Party endorsed the idea in 1920. Drawing from both American and European sources,

[36] Ibid., 89-98.

this early iteration of the concept disputed the Nationalist argument that birth control was an American plot foisted on Puerto Rico by its colonial masters. The Socialist Party proposal argued for a government program that would provide contraception to island residents to reduce the number of poor and uneducated children they saw as a burden to future development. They advocated for a modernizing vision of Puerto Rico where birth control would allow working-class women to control their childbearing. By providing women with this ability to control their reproduction, they envisioned improvements to children and women's health, stronger families, and eventually, a more prosperous nation. These early efforts culminated in a bill to decriminalize the promotion of birth control in 1923. This bill was not adopted, but the ideas it contained informed and animated the movement going forward.[37]

The public debate about birth control in Puerto Rico began in 1922 with the publication of an article entitled "Practical Malthusianism" in *La Democracia*.[38] The author, Jacinto Ortega, was Luis Munoz Marin, writing under a pseudonym. Munoz Marin was the son of Luis Munoz Rivera, one of the island's most prominent and influential political leaders. In the late nineteenth century, the father had been an advocate of freedom from Spain and continued to provide political leadership through his Union Party newspaper, *La Democracia*.[39]

His son, Luis Munoz Marin, worked as a poet and journalist in New York, contributing to publications in Puerto Rico and the United States. His use of a pseudonym

[37] Ibid., 90.

[38] "Practical Malthusianism," *La Democracia,* August 21, 1922.

[39] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception,* 16.

for this article reveals his reluctance to associate himself with the birth control movement publicly, but the article itself advocated for birth control as a solution to the problems he saw in Puerto Rico. Munoz Marin worked in academic and literary circles in New York, and his thinking was influenced by the emerging birth control work of Margaret Sanger.[40]

In "Practical Malthusianism," Munoz Marin presented his ideas about birth control and their importance for the economic and spiritual growth of Puerto Rico. He argued that measures that ensured more equitable wealth distribution and increased productivity were insufficient to solve the island's problems without a concomitant decrease in the birth rate. Arguing for a more expansive vision of the problem of overpopulation, he wrote: "Let us take our island out of poverty by reducing the number of mouths to be fed, the number of feet to be shod, the number of bodies to be clothed, the number of children to be educated. How? By following with due seriousness the doctrines held by Mrs. Sanger in the United States."[41] Like his Socialist Party colleagues, Munoz advocated for government responsibility for providing low-cost contraceptives to all citizens who requested assistance. This was a radical position in an era when laws proscribed open discussion of contraception, and the prospect of public health involvement in the project was negligible.

Munoz Marin expanded his argument in an interview published in *El Mundo* in June 1923.[42] In this interview and subsequent publications, he used his given name, demonstrating his apparent willingness to associate his family name and future political

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[40] Ibid., 16-7. For further information about Luis Munoz Marin see, A.W. Maldonado, *Luis Munoz Marin: Puerto Rico's Democratic Revolution* (San Juan: La Editorial, Universidad de Puerto Rico, 2006).

[41] "Practical Malthusianism," *La Democracia,* August 21, 1922.

[42] *El Mundo* was a daily newspaper published in San Juan, Puerto Rico from 1919-1986.

fortunes with the cause of contraception. In this interview, he described Puerto Rico as "a raft adrift with 1,300,000 victims who scratch, bite, and kick to obtain the few supplies on board." Instead of advocating for birth control on economic grounds, Munoz Marin argued for the preservation of Puerto Rico's spiritual values and "ancestral cordiality and generosity." Anticipating opposition from the usual conservative and Catholic sources, he attempted to preempt their arguments when he claimed, "only whited sepulchers and the stupid would dare challenge it with moral arguments."[43]

The anticipated opposition materialized quickly, with the first response coming from Dr. Jose Montenegro, a Venezuelan physician. Montenegro argued that birth control harmed women by upsetting the delicate balance of their reproductive systems. Such meddling would result in neurasthenia and madness in females exposed to contraception.[44] Montenegro further argued that birth control was tantamount to torture for women when he wrote, "there is no greater folly than exposing the queen of the home to such tortures, depriving her of the natural satisfaction of seeing herself surrounded by all her rosebuds."[45] He based his opposition to birth control on a romantic conception of motherhood divorced from the reality facing Puerto Rican women.

Munoz Marin responded by refusing to engage the Venezuelan physician on his scientific arguments. Instead, he accused Montenegro of sentimentality and profound ignorance of Puerto Rico and its problems. In a pointed rebuttal, Munoz Marin described

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[43] Luis Munoz Marin, "El Partido Socialista," *El Mundo,* June 27, 1923.

[44] Neurasthenia was a nervous condition identified by physical and nervous exhaustion. It was originally found in both men and women, but it became associated with feminine frailty during the 19th century. See, Susan E. Cayleff, "'Prisoners Of Their Own Feebleness': Women, Nerves and Western Medicine," *Social Science and Medicine* 26, no. 12 (1988): 1203-5.

[45] Jose Montenegro, *El Imparcial,* July 7, 1923.

the situation on the island. He wrote, "In our countryside and in our slums, children are not flowers that perfume the home, but tremendous problems that complicate the lives of our proletarians, killing their hopes and sapping their energies. Our poor families see the coming of another child to share their crust of bread as one sees the coming of a great scourge."[46] This interchange between Montenegro and Munoz Marin illustrates the ideological divide around birth control in Puerto Rico during this period. Birth control opponents viewed children as a source of "maternal satisfaction" and "rosebuds" while birth control advocates portrayed children as "problems" and "great scourges." This level of discord would bedevil any attempts to initiate contraceptive services on the island for the next two decades.

The Catholic response came from Monsignor Joseph Caruana, bishop of Ponce, in an article in the Catholic newspaper, *La Correspondencia.* The bishop did not address the issues initially raised by Munoz Marin but limited his response to a reiteration of Catholic dogma. Bishop Caruana claimed that birth control was a subject which "should not be so much as named" because discussion of this issue was harmful to "the decorum and modesty which should distinguish Christians." The letter concluded with the bishop's admonition against Catholics committing "race suicide" and threatened excommunication against those that pursued contraception.[47]

Munoz Marin's lengthy response avoided a direct rebuttal of church doctrine but presented his arguments for birth control in Puerto Rico as a challenge to the absolute moral position of the Catholic Church. He advanced a relativist argument, relying on

[46] Luis Munoz Marin, *El Imparcial,* July 9, 1923.

[47] Monsignor Joseph Caruana, *La Correspondencia,* July 13, 1923.

utilitarian principles that accounted for the conditions he confronted on the island. He argued that the biblical injunction to "be fruitful and multiply and fill the earth" was appropriate in the context of a planet with two inhabitants and ample land and resources to support further population increases. The situation in Puerto Rico was vastly different and required different approaches. He challenged the church as cruel and uncaring when he wrote, "A reduction in the birthrate can only be achieved by limiting conception voluntarily. The religious doctrine which condemns this procedure is also condemning humans to incalculable suffering and waste of energy."[48]

Munoz Marin took pains to refute the bishop's specific race suicide argument instead of disavowing the race suicide concept entirely. He argued that unfettered population growth would lead to race suicide more surely than the practice of contraception. In a comparison of Holland's controlled growth and prosperity with India's poverty and rapid population growth, Munoz Marin presented his goal for Puerto Rico when he wrote, "My ideal is not only to assuage human suffering and economic wastefulness…but also to reduce population growth and even the population itself. The campaign [for birth control] in Puerto Rico would have to be more intense and persistent than that in Holland, if it is to be carried out with this objective in mind."[49] Munoz Marin succeeded in bringing the issue of birth control to the Puerto Rican public, but he was unable to create a functioning birth control program on the island.

Although Munoz Marin's public jousting with birth control opponents raised the profile of the issue in Puerto Rico, implementation of a birth control program remained

[48] Luis Munoz Marin, *El Imparcial,* July 24, 1923.

[49] Ibid.

illegal. Article 268 of the criminal code forbade the teaching of contraception and placed birth control advocates at risk for up to five years of imprisonment for breaking the law.[50] This law would complicate any efforts to prescribe birth control or disseminate contraceptive information until it could be either challenged or repealed. Puerto Rico was also regulated by federal law on this issue, subjecting the island to the federal Comstock Laws.

Dr. Jose Lanauze Rolon, a Howard University-trained general practitioner in Ponce, reinvigorated the birth control movement by forming the first insular birth control organization. On November 25, 1925, he met with other prominent citizens of Ponce and formed the *Liga para el Control de Natalidad de Puerto Rico* (League for Control of Natality). The League (LCN) was dedicated to the repeal of Article 268 and providing birth control to poor and working-class Puerto Ricans to produce healthier children, alleviate poverty, and end criminal abortions. Rolon criticized other physicians because their refusal to prescribe contraceptives led to abortions and increased risks for their female patients.[51]

Dr. Rolon sought assistance from Margaret Sanger and affiliation with the American Birth Control League (ABCL). Sanger advised him to select prominent community members and physicians to serve on the board of directors for the LCN. She also provided some examples of ABCL literature and referred him to sources of birth control books and devices. There is no record of any further formal communication between the two groups, and the LCN never formally affiliated with the ABCL. This

[50] J.C. Ruppenthal, "Criminal Statutes on Birth Control," *Journal of Criminal Law and Criminology* 10, no. 1 (May 1919): 60.

[51] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception,* 20.

brief communication does underscore the common goals of the two groups and the willingness of the Puerto Rican league to cooperate with mainland birth control advocates.[52]

Three days after the organizational meeting, *El Mundo* published an editorial supporting the work of the LCN. It decried the continuing influence of Article 268 and agreed with the LCN that the law should be repealed. The editorial further argued that a focus on the working class was necessary and desirable because of the "desperate poverty of the home of the working classes." This editorial focused on the children of the rural poor describing them as a "generation undermined since childhood, destined, even before birth, to pass uselessly through life, a victim of itself, of the fatal legacy left by its parents." This editorial betrayed an upper-class elitism by complaining about the ignorance of the working class and their inability to grasp or support something that "could serve as the foundation of their domestic happiness."[53] This unfortunate tendency to blame the poor for their inability to accept the help offered by others can be found in writings throughout this period. No mention was made of the inevitable and forthcoming Catholic opposition.

Another supportive editorial appeared on November 30 in the *Times*. This editorial was equally sympathetic to the LCN but couched its support in claims based on neo-Malthusian thought. Describing Puerto Rico as a "rapidly overpopulated island" the writer advocated for birth control in Puerto Rico because "the idea should be encouraged for it will undoubtedly decrease the high crime percentage, by eliminating one of its

[52] Margaret Sanger to Dr. Jose A. Lanauze Rolon, March 9, 1926, in *El Mal de los Muchos Hijos,* by Marcos Huigens, Martin Bertnsen, and Jose A. Lanauze Rolon (Ponce: n.p., 1926), 10-11.

[53] Editorial, *El Mundo* (San Juan), November 28, 1925.

principal causes, namely '*hambre*.'"[54] This editorial anticipated opposition from Catholic sources and attempted to preemptively blunt their arguments by depicting the conservative opposition as cruel and out of touch with contemporary insular reality.[55]

As in previous instances, the Catholic response was brisk and forceful. Two priests identified only as "two Dominican fathers," answered Rolon in a series of editorials in *El Piloto,* a Catholic newspaper. Although the priests opposed Rolon on many issues, they focused their attention on the two ideas that they considered to be the most egregious assaults on Catholic morality. They challenged the morality of neo-Malthusian population control as intrinsically wrong and "filthily immoral." The priests also disputed Rolon's ideas on the role of sex in marriage. They condemned the separation of intercourse from reproduction, arguing that the "spouse's enjoyment of carnal pleasure while artificially preventing conception" was immoral and contravened accepted Catholic doctrine.[56] This period of editorial jousting lasted four months, with each side remaining entrenched in its position with little middle ground available for further discussion or negotiation.

As the publicity battle waged in the newspapers, the LCN pursued its concrete goals of repealing Article 268 and opening a clinic to provide birth control services. Representative Martinez Reyes reintroduced a bill to decriminalize contraception. It was defeated, but the debate further publicized the idea of birth control. Although the publicity undoubtedly disseminated the concept of birth control, this defeat foreshadowed

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[54] Editorial, *The Times* (San Juan), November 30, 1925.

[55] Ibid.

[56] Editorial, *El Piloto* (Ponce), July 1, 1926.

the battles to come for the next decade as legal obstacles continued to confound the movement in Puerto Rico and the United States. It is unclear whether the contemplated clinic ever opened as the sources disagree on this matter.[57]

Puerto Rico and its fragile birth control movement were dealt a severe blow when two disasters befell the island in the late 1920s. The first disaster, Hurricane San Felipe, roared ashore on September 13, 1928. The storm devastated Puerto Rico, leaving 300 dead and $80 million in property damage. Two hundred and fifty thousand homes were destroyed, and one-half of the sugar crop was lost. The coffee plantations sustained similar losses as the storm's destruction of 50% of the mature trees effectively shuttered the industry for three years while new trees were planted and grew to maturity.[58] The storm left Puerto Rico economically vulnerable when the second disaster occurred a year later.

Following the devastation of Hurricane San Felipe, the onset of the Great Depression in Puerto Rico shattered the fragile island economy. Like Appalachia, Puerto Rico had always been poor and was already economically distressed when the Great Depression began. As the mainland economy collapsed, the situation on the island became dire. A Brookings Institution report from 1930 highlighted the problems. Rural workers survived on less than $150 per year, and prices rose as Puerto Rico imported most of its food and clothing from the United States. The Brookings report also focused on overpopulation and its detrimental effects on the island. The report stated that the

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[57] Carmen R. De Alvarado and Christopher Tietze, "Birth Control in Puerto Rico," *Human Fertility* 12, no. 1 (March 1947), 15; Iris Lopez, *Matters of Choice: Puerto Rican Women's Struggle for Reproductive Freedom* (New Brunswick: Rutgers University Press, 2008), 11. Alvarado and Tietze claim that no clinic was ever opened while Lopez asserts that a clinic was opened in San Juan during this period.

[58] Carrion, *Puerto Rico,* 212.

population "had outrun the capacity of the present economic resources and organization to furnish full employment and satisfactory living conditions."[59] Despite its focus on overpopulation, the Brookings report never mentioned birth control as a mechanism for mitigating this problem.

The Brookings report also perceived further links between the poor residents of Puerto Rico and Appalachia. The authors noted racial similarities between the two groups when they claimed that "African slavery drove the poor whites into the mountains, as it did in our southern states, where isolation and absence of cultural and economic opportunities perpetuated or created a special type, the mountain peasant or jibaro…He presents some parallels with the cabin dwellers of the southern Appalachians." Puerto Ricans, like Appalachians, were viewed as morally primitive but salvageable with appropriate influence from outside groups. The report explained the causes of this moral taint as "Generations of civic and spiritual neglect have given him (the jibaro) some of the primitive mores of the indigenees. His family ties are often merely consensual, and his children therefore technically illegitimate; but he is not immoral in an anti-social sense."[60] As in the case of Appalachia, outside groups often located the root of Puerto Rico's problems in the sexual mores of its poor residents.

Political infighting between the insular political parties and ineffective relief efforts by the federal government consumed the first years of the Great Depression in Puerto Rico. The political debates centered on the government's role on the island and whether Puerto Rico's status as a colony had led it to its present economic situation.

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[59] Clark, *Porto Rico and Its Problems*, 21.

[60] Ibid., 9.

Overpopulation became a critical issue in these debates as each side attempted to assign blame for the island's problems. The Nationalist Party adopted an anti-contraception stance that depicted birth control as a foreign technology imposed by mainland imperialists to deflect attention from the island's real problems.[61]

This suspicion of American motives was inflamed by a letter written by Dr. Cornelius Rhoads, a physician employed by the Rockefeller Foundation in San Juan. Rhoads wrote the infamous letter as a private message to a friend, but a laboratory assistant discovered it and leaked it to the press. In the letter, Rhoads chronicled his hatred for Puerto Ricans and his efforts to kill or injure his patients. Dr. Rhoads described his Puerto Rican patients as "the dirtiest, laziest, most degenerate and thievish race of men ever inhabiting this sphere." He further demonstrated his contempt for them when he wrote:

> What this island needs is not public health work but a tidal wave or something to totally exterminate the population. It might then be livable. I have done my best to further the process of extermination by killing off eight and transplanting cancer into several more…. The matter of consideration for the patients' welfare plays no role here-in fact, all physicians take delight in the abuse and torture of the unfortunate subjects.[62]

Subsequent investigations cleared Rhoads of any wrongdoing, but his improvident letter supported the more radical Nationalist belief that birth control was a genocidal plan to exterminate the island's population.[63]

Although the political climate was hostile to birth control, in early 1932, a new organization, The Birth Control League of Puerto Rico (BCLPR), was formed in San

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[61] Gordon, *The Moral Property of Women,* 239

[62] *El Mundo* (San Juan), January 27, 1932.

[63] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception,* 26-7.

Juan. Under the leadership of prominent attorney Carlos V. Torres and his wife Estella Torres, the BCLPR opened clinics in San Juan and Mayaguez. No record of the patients served or the results they achieved has survived, and the clinics closed before the end of 1932 due to Catholic hostility and lack of funding.[64] These short-lived clinics represent the first organized birth control clinics on the island. Following the collapse of the BCLPR, the next phase of the Puerto Rican birth control movement centered on government-sponsored efforts as part of New Deal relief programs.

When Franklin Roosevelt was inaugurated in January 1933, the situation in Puerto Rico was dire. Under the auspices of the New Deal, the Puerto Rican Emergency Relief Administration (PRERA) launched various relief programs, including a maternal health service program.[65] The director of PRERA, James Bourne, had been a neighbor of Franklin and Eleanor Roosevelt in Hyde Park, NY and worked in Puerto Rico as an industrial manager. His wife, Dorothy Bourne, was also prominent on the island as the founder of the School of Social Work at the University of Puerto Rico. Bourne communicated directly with the administration in Washington, DC and this familiarity allowed him to work autonomously, without interference from the more conservative local political apparatus.[66]

Soon after he assumed office, Bourne submitted a report on the conditions he found on the island and his recommendations for programs to alleviate those problems. Although the bulk of the report presented recommendations for public health projects to

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[64] Tietze and Alvarado, "Birth Control in Puerto Rico", 15.

[65] Thomas Mathews, *Puerto Rican Politics and the New Deal* (Gainesville: University of Florida Press), 128-9.

[66] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception,* 32.

combat infectious diseases, the report also outlined plans to combat overpopulation. In fact, Bourne viewed overpopulation as "the most serious question to be faced by any farseeing administration." The report argued for a program of "birth control education (that) could be carried on through the existing health units without increasing the personnel, providing the present law was altered." Bourne anticipated opposition from the Catholic Church but chose to push forward with his plans.[67]

Bourne assigned the birth control work to the education division of PRERA. This organization provided resources for schools, established daycare centers, and promoted adult education. Birth control education was provided through adult education classes and written materials. The PRERA magazine, *La Rehabilitacion,* also published articles on sex education and marriage. PRERA established a single birth control clinic in San Juan, but it closed quickly due to Catholic opposition.[68]

In early 1934, Assistant Secretary of Agriculture Rexford Tugwell was sent to Puerto Rico to survey the situation and recommend further relief efforts. He was not an advocate for birth control, but his visit to Puerto Rico changed his thinking. In a letter to Secretary of Agriculture Henry Wallace, Tugwell argued for birth control to prevent a mass migration of Puerto Ricans to the mainland, basing his argument on a racist vision of Puerto Ricans and his fear of race suicide in the United States. In his letter, Tugwell described the situation he encountered: "There will be something like a crisis here soon…with the pressures that are accumulating. There must be either an increase in our charity or a mass movement outward of population." He was clearly concerned about the

[67] Ibid.

[68] Carlos Gil Ramos-Bellido, "The Politics of Birth Control in Puerto Rico" (PhD diss., University of California, Berkeley, 1977), 70.

quantity of possible immigration from Puerto Rico, but the letter betrayed his greater fear of the quality of these potential immigrants. On this issue, he wrote: "Our control of the tropics seems to me certain to increase immigration from here and the next wave of the lowly…will be these mulatto, Indian, Spanish people from the south of us. They make poor material for social organization, but you are going to have to reckon with them."[69] On his return to the mainland, Tugwell reported his findings and his newfound support for contraception to President Roosevelt.[70]

President Roosevelt made his support for birth control in Puerto Rico apparent during his visit to the island in July 1934. Roosevelt approved of the PRERA birth control efforts, but he hedged his bets in the face of opposition on the island. At a dinner in San Juan, he assured the audience that his administration would not support government-sponsored birth control clinics despite his previous assurances to Bourne. This statement seems to have been intended to placate Reverend Edwin Byrne, Catholic bishop of San Juan, who was in attendance that night. Later, Bourne reported that he understood Roosevelt's political maneuvering and promised to "take the heat of birth control."[71]

This political maneuvering proved successful for two years. During this period, the PRERA, and its successor, the Puerto Rican Reconstruction Administration (PRRA),

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[69] Rexford G. Tugwell to Henry Wallace, March 16, 1934, quoted in Mathews, *Puerto Rican Politics,* 159.

[70] Lopez, 13.

[71] Kent C. Earnhardt, *Development Planning and Population Policy in Puerto Rico: From Historical Evolution Towards a Plan for Population Stabilization* (San Juan: Editorial de la Universidad de Puerto Rico, 1982): 22-3.

opened 67 clinics and served more than 10,000 women.[72] While the clinics functioned, Bishop Byrne turned a blind eye to their existence. The situation changed in September 1936 when Cardinal Hayes in New York became aware of the program and protested to James Farley at the Democratic National Committee Headquarters. Roosevelt's lukewarm support for the program evaporated when he saw his reelection chances threatened by exposure of the program to mainland Catholics. Mainland political opposition to the PRRA program forced it to disband, and all clinic work ceased on September 15, 1936.[73] Dr. Jose Belaval, medical director for the clinics, summed up their results. In a letter to the PRRA, he wrote: "With no follow up and no contraceptive material to be supplied to the patients, the 3404 women treated were lost, and the work gone to the wind, as we could not reach definite results regarding the cases.[74] Belaval considered the effort to be a failure, but the coming years would provide him with an opportunity to create a more successful clinic system.

## "Projects Along the More Simple Contraceptive Lines": The American Birth Control Movement Comes to Puerto Rico

By the end of 1936, the birth control movement in Puerto Rico was in disarray. The federal government had withdrawn approval and funding for the PRRA program, and no local groups were capable of assuming that responsibility. Legal obstacles and resurgent Catholic opposition hampered any attempt to organize a clinic on the island. Although the situation appeared bleak, mainland birth control advocates expressed

[72] Ramos-Bellido, The Politics of Birth Control in Puerto Rico, 71.

[73] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception*, 44.

[74] Jose Belaval, "Report," 1937, CGP, Box 45, Folder 735.

interest in reviving Puerto Rico's moribund birth control program.

Gladys Gaylord, a social worker from Cleveland and the founder of a successful birth control service there, visited Puerto Rico in June 1935 to assist in the creation of the government-sponsored clinic system.[75] Clarence Gamble contacted her in October 1936 to enlist her assistance in his plan to revive some of the defunct clinics. Gamble understood that the facilities and supplies were still available and wanted to open a demonstration program in San Juan. He cautioned that a diaphragm program would be too expensive and recommended the cheaper but less effective foam powder and jelly methods.[76]

Gaylord agreed that it was possible to revive the clinic system but advocated for a more expansive project with at least five clinics. She vouched for the ability of the Puerto Ricans she met on her visit and maintained that they could run the clinics without the direct participation of mainland researchers.[77] In making these recommendations, Gaylord challenged two of Gamble's cherished beliefs about this project.

Gaylord also directly challenged Gamble on his choice of contraceptives and his motives for making that choice. Gaylord had experience with diaphragms and felt that the advantages of this method outweighed the disadvantages. Her advocacy for diaphragms is displayed in a section of her letter where she paradoxically praises Puerto Ricans for their intelligence but criticizes them for their promiscuity. Gaylord wrote: "The percent of success of the diaphragm method in Puerto Rico would probably be higher than in the

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[75] *The Encyclopedia of Cleveland History*, s.v. Gladys Gaylord http://ech.case.edu/cgi/article.pl?id=GG (accessed April 28, 2017).

[76] Clarence J. Gamble to Gladys Gaylord, October 23, 1936, CGP, Box 45, Folder 733.

[77] Gladys Gaylord to Dr. Clarence Gamble, October 26, 1936, CGP, Box 45, Folder 733.

United States due to the lithe figures of the women, their long fingers, lack of inhibitions in regard to sex, and their teachability."[78]

This exchange between Gamble and Gaylord highlights many of the cultural prejudices mainland researchers brought to the island. As he had in Appalachia, Gamble opposed diaphragms because of their expense and because he believed that local women were unable to master their use due to their lack of intelligence and lack of hygiene.[79] Gaylord argued for the use of diaphragms, but she also promoted the idea that Puerto Rican women were promiscuous and immoral.[80]

Gamble met with Dr. Ernest Gruening, the administrator of the PRRA, at the Interior Department in Washington DC in late October 1936. Gruening apprised Gamble of the political situation on the island and told him that the majority of island residents approved of birth control, but the Catholic hierarchy had undermined the program with political pressure during the presidential election campaign. Gruening supported the idea of reviving the program but cautioned Gamble that further government involvement was not possible in the current political climate. He recommended raising funds from wealthy families on the island to replace the lost government funding.[81]

After meeting with Gruening, Gamble sent Phyllis Page on a fact-finding mission to Puerto Rico to assess the situation. Page, a nurse from Philadelphia, had helped create the Mountain Maternal Health League in Berea, KY, earlier in 1936. Page toured the

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[78] Ibid.

[79] Williams, *Every Child a Wanted Child,* 120.

[80] Gladys Gaylord to Dr. Clarence Gamble, October 26, 1936, CGP, Box 45, Folder 733.

[81] Memorandum entitled "Conference with Dr. Ernest Gruening" by Phyllis Page, October 26, 1936, CGP, Box 45, Folder 734.

island, meeting with local birth control advocates and issuing periodic reports to Gamble. She viewed her assignment as representing "Dr. Gamble's interest in rural projects along the more simple contraceptive lines."[82]

As was his custom, Gamble peppered Page with instructions and requests throughout her stay in Puerto Rico. He instructed her to advocate for the cheaper foam powder method for the upcoming studies and cautioned her to avoid revealing the name of the contraceptive jelly they planned to use. Gamble was negotiating with jelly manufacturers and planned to use the least expensive product available, whether it had been proven efficacious or not. Indeed, it appears that he was willing to test new products in Puerto Rico despite concerns about their safety or efficacy.[83] In contrast to his willingness to test new medications, Gamble wanted his latest project to build on the contemporaneous programs in Appalachia. He wanted to create a system using "house to house nurses" instead of hospital-based clinics, and he recommended using the forms that his colleagues had developed for his work in West Virginia and Kentucky.[84] Gamble's belief in his methodology was admirable, but the Berea project was just getting underway, and no data was yet available to affirm or refute his faith in his method.[85]

Gamble was also in the midst of yet another dispute with the American Birth Control League. As usual, the ABCL objected to his unwillingness to coordinate his work

[82] Phyllis Page to Dr. Eric Matsner, November 11, 1936, CGP, Box 45, Folder 733.

[83] Clarence J. Gamble to Phyllis Page, November 21, 1936, CGP, Box 45, Folder 733.

[84] Clarence J. Gamble to Phyllis Page, November 21, 1936, CGP, Box 45, Folder 733; Phyllis Page to Clarence J. Gamble, November 3, 1936, CGP, Box 45, Folder 733.

[85] The Berea trial began in March 1936. The Logan trial was started in 1934 but began entering patients in early 1936 after a prolonged period of preparation.

and his financial contributions with their efforts. He wished to remain active with the group, but he frequently resisted their oversight and guidance.[86] His ongoing problems with the ABCL would complicate his efforts in Puerto Rico and lead to his eventual resignation from the organization.[87]

Page suggested that a decrease in abortions could be used as evidence of the efficacy of birth control. Gamble disagreed with this reasoning because he felt that abortion statistics were notoriously inaccurate and difficult to obtain. Even if contraception could be proven to decrease the number of abortions, Gamble claimed that it would make no difference to "real Catholics" because, in their eyes, "birth control is just as great a crime."[88] Gamble expressed a reasonable fear that any involvement with abortion would be used to demonize the work he was doing. However, Page was simply repeating an argument used by mainland birth control advocates to demonstrate the importance of contraceptive availability.

The issue of abortion was always problematic for birth control advocates in this era. Abortions were common, and many women resorted to the procedure, but they were also illegal and dangerous. Support for abortion was seen as too risky and politically sensitive for a movement that faced its own legal issues. In her book, *Woman and the New Race*, Margaret Sanger presented her argument that birth control was a solution to the problem of illegal abortions. Sanger claimed that that "family limitation will always

[86] Clarence J. Gamble to Phyllis Page, December 8, 1936, CGP, Box 45, Folder 733.

[87] Williams, *Every Child a Wanted Child,* 166-7.

[88] Clarence J. Gamble to Phyllis Page, November 27, 1936, CGP, Box 45, Folder 733.

be practiced as it is now being practiced-either by birth control or abortion."[89] The ABCL also advocated for the possibility of the wide availability of birth control for several reasons, including the effect of contraception on reducing abortions. The League's mission statement decried the "unwanted pregnancies that often provoke the crime of abortion" and argued that a "world program of birth control" was necessary to eliminate the need for abortion.[90]

By creating this dichotomy between safe, legal birth control and dangerous, illegal abortion, Sanger and the ABCL attempted to distance the movement from the unsavory associations of abortion. In her biography of Sanger, Jean Baker claims that although Sanger approved of abortion in certain circumstances, she wanted to privilege contraception over abortion as a means of birth control. This distinction was necessary because the association between abortion and birth control was often encouraged by opponents of the movement, including the Catholic Church.[91]

Despite the ongoing political maneuverings and his lack of experience on the island, Gamble was able to reopen some of the clinics closed by the PRRA. Twenty-three clinics were opened under the auspices of the Maternal and Child Health Association (MCHA), an organization formed by veterans of the PRRA system, including Dr. Belaval and Estella Torres. Gamble provided some of the funding for the new organization and cooperated with them in setting up their research protocols and administrative structure.[92]

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[89] Margaret Higgins Sanger, *Woman and the New Race* (1920; repr., London: Forgotten Books, 2008), 67.

[90] Sanger, *The Pivot of Civilization*, 81-2.

[91] Baker, *Margaret Sanger,* 85-6

[92] Tietze and Alvarado, "Birth Control in Puerto Rico," 16.

While Gamble and the MCHA were reopening birth control clinics on the island, Dr. Eric Matsner, Medical Director of the ABCL, published an article that soured relations between mainland and insular birth control workers. Even the article's title, "Puerto Rico: Old Woman in a Shoe," insulted and belittled the island's residents. Matsner blamed overpopulation for many of the island's problems and described the population increase as "locust like."[93] Although this statement was both untrue and provocative, he reserved some of his most egregious language to describe poor Puerto Rican families.

In his controversial article, Matsner described the lives of Puerto Rico's poor families in apocalyptic terms:

> The foulness of the Puerto Rican peon's existence can hardly be described. He lives literally in a state of chronic starvation, crowding his filthy, scarecrow body into a hut where his female counterpart and their numberless wretched children almost always share at least one of his diseases…It is the peon who is reproducing himself most wildly; whose rotting fungus life is bursting out of the island more swiftly than that of any other class. Students of the hot countries…are well acquainted with the fact that tropical people always breed up to the limit of subsistence, and it is only natural that the more primitive the individual, the more promiscuous his sexual habits will be.[94]

In an era where such language was unfortunately common, Matsner's writing managed to widen the rift between Gamble and the ABCL while he offended the supporters he needed to garner.

Later in the article, Matsner betrayed what might have been the central theme of the article. He expressed concern for the quality of Puerto Rican immigrants that found their way to New York City. He based his concern on the presumably lower intelligence

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[93] Eric M. Matsner and William Laidlaw, "Puerto Rico: Old Woman in a Shoe," *The North American Review* 242, no. 2 (Winter 1936/1937): 271.

[94] Ibid., 277-9.

and moral standards of these immigrants claiming that "they are actually incapable, morally and physically, of adjusting themselves even to the lowest standards of civilization known in the city."[95] Matsner's arguments here align with the eugenics-based race suicide arguments that were prevalent at the time.

The article recommended a universal birth control program to forestall these problems on the island and in mainland cities that received Puerto Rican immigrants. A robust experimental birth control program on the island had the potential to redound to greater benefits among residents of "many other parts of the world where human life is cheap, including our own South." Matsner sounded the alarm for immediate action, arguing that rapid progress toward universal birth control was all that could save the island from "Puerto Rico's Frankenstein monster" to avoid being "strangled by its own flesh and blood."[96] Undoubtedly, Matsner's rantings reminded island citizens of their prior experience with mainland medical authorities, such as the reviled Dr. Rhoads.

Gamble and Page took exception to several of the claims made in Matsner's account. Page described the article as "hurtful" and argued that "the whole tone of it seemed…unsound and unjustified." Matsner also claimed credit for the ABCL for the creation of the MCHA.[97] Page found this claim to be particularly egregious and misleading based on her experience with Matsner on his short visit to Puerto Rico. Her version of events differed sharply from his, and she criticized the ABCL for employing

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[95] Ibid., 280.

[96] Ibid., 287.

[97] "Minutes of Annual Meeting of American Birth Control League," January 26, 1937, Planned Parenthood Federation of America records (Part I), Sophia Smith Collection, Smith College, Northampton, MA, Box 1, Folder 17.

"low tactics" and argued that their attempt to "take their credit from such a flimsy basis seems…hardly worthy of a national organization."[98] Although this conflict subsided quickly, the tensions between Gamble and the ABCL continued to fester in the coming years. Gamble and Page objected to another group taking credit for their work but found little fault with Matsner's demeaning and misleading depictions of life in Puerto Rico.

While mainland birth control supporters busied themselves with petty infighting, the MCHA proposed a bill to legalize contraception to the insular legislature. The bill, which became Law 133, passed through both houses in the island legislature in April 1937. This law amended the penal code to make the dissemination of contraceptive information and methods legal by removing the penalty they entailed under Section 268.[99] Opponents and supporters of the bill now focused their lobbying efforts on Governor Blanton Winship, whose signature was required before the law could go into effect.

Bishop Byrne, leading the Catholic resistance, depicted a bleak future when he wrote to Winship, claiming that "if our Government now legalizes immorality…then our government will be following the lead of Communist Russia which also has legalized birth control." He appealed to "the moral prestige of the United States and the moral prestige of Christian Puerto Rico," imploring the governor to "save us from such a national shame."[100] Byrne also encouraged a petition campaign that obtained thousands

[98] Clarence J. Gamble to Carmen De Alvarado, February 24, 1937, CGP, Box 45, Folder 736.

[99] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception*, 49.

[100] Monsignor Edward V. Byrne to Governor Blanton Winship, April 2, 1937, included with letter from Michael Ready, General Secretary, National Catholic Welfare Conference, to President Franklin D. Roosevelt, April 12, 1937, official file 200, Puerto Rico, Franklin D. Roosevelt Library, Hyde Park.

of signatures in parishes across the island. In concert with Byrne, Mainland Catholic groups urged President Roosevelt to intercede with the governor, who he appointed and could remove from office.[101]

Mainland birth control supporters also exerted pressure on Winship. The MCHA marshaled its mainland allies and enlisted Gamble in their cause.[102] Gamble wrote to the governor urging him to sign the bill "for physicians' freedom and vital service to mothers and children."[103] He requested letters of support from Margaret Sanger and various birth control organizations.[104] The Puerto Rico Medical Association, the Graduate Nurse's Association, and the Commissioner of Health also expressed support for the bill.[105]

Despite the broad-based demonstration of support for the enactment of Law 133, the final step in the process required some adroit political maneuvering by Governor Winship. Winship supported the measure, but he was a Protestant and feared a political backlash if he signed the bill over Catholic opposition. He sought the counsel of Ernest Gruening, who devised a plan to get the law signed without risking Winship's political viability. Gruening advised Winship to leave Puerto Rico and appoint Rafael Menendez Ramos, the Commissioner of Agriculture, as acting governor."[106] Menendez Ramos was a Catholic, but he was known to support the bill. Winship left the island, and Menendez

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[101] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception*, 50.

[102] Estella A. Torres to Phyllis Page, April 7, 1937, CGP, Box 45, Folder 736.

[103] Ibid.

[104] Phyllis Page to Carmen De Alvarado, April 14, 1937, CGP, Box 45, Folder 736.

[105] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception*, 49.

[106] Ernest Gruening, *Many Battles: The Autobiography of Ernest Gruening* (New York: Liveright, 1973), 102.

Ramos signed the bill on May 1, 1937. He also signed Law 116, which established a Eugenics Board for the island and created a framework for compulsory sterilization, and Law 136, which authorized government-sponsored birth control services through the existing public health centers. Laws 133 and 136 both allowed the MCHA to legally pursue its birth control work but also potentially rendered this work superfluous by creating a system of government-sponsored clinics.[107]

The opposition refused to concede and questioned the legitimacy of Law 133 because it conflicted with a US statute prohibiting the use of contraceptives. As part of the complicated legal relationship between the federal government and Puerto Rico, no law passed by the island's legislature could conflict with any mainland statute. The ambiguity of the situation left Dr. Eduardo Garrido Morales, the commissioner of health, in a difficult situation. He was appropriately reluctant to disburse funding for the recently approved government clinics while unsure of their ultimate legality.[108]

Estella Torres, president of the MCHA, and five other directors of the Association arranged for a test case to be heard in Federal Court to clarify the situation.[109] They requested a hearing before District Judge Robert A. Cooper for a verdict without a jury.[110] This gambit created some personal risk for the defendants; if found guilty, they faced up to five years in prison.[111] Gamble attempted to gather support for them in the

[107] Ramirez de Arellano and Seipp, *Colonialism, Catholicism, and Contraception*, 50.

[108] Williams, *Every Child a Wanted Child*, 170.

[109] Tietze and Alvarado, "Birth Control in Puerto Rico," 17.

[110] "The Decision in the Puerto Rico Case," *Journal of Contraception* 4, no. 4 (April 1939): 81.

[111] Ruppenthal, "Criminal Statutes on Birth Control," 60.

months leading up to the trial. He wrote to Margaret Sanger asking her advice and recommendations for legal advice. Sanger had been involved in many legal issues around her birth control advocacy and had acquired an excellent legal team during her travails. Gamble also noted that the original law, Section 268, contained provisions that criminalized cockfighting and lotteries. Since he assumed that these somewhat unsavory pursuits were popular amusements among Puerto Rican peasants, he argued that publicizing their potential decriminalization would result in a groundswell of public support for the new statutes.[112]

In the interim, between the enactment of Laws 133 and 136 and the federal court ruling Bishop Byrne also made a final attempt to overturn the laws. In an article titled "Birth Control Invades Puerto Rico," he made a strident Catholic argument against birth control. The article was published in *The Sign* magazine and was intended for an American Catholic audience. Speaking for Puerto Rican Catholics, he wrote, "Many here believe that Puerto Rico has been made an experimental station in social questions. If the experiments succeed in this Insular Possession, they may be tried in the continental United States."[113] Although he would not have recognized them as allies, later commentators would echo his assessment of the uses and misuses of Puerto Rico by American researchers.[114]

Judge Cooper heard the case in December 1938 and rendered his verdict in favor

[112] Clarence James Gamble to Margaret Sanger, September 10, 1938, PPFA records (Part I), Box 41, Folder 8.

[113] Edwin V. Byrne, "Birth Control Invades Puerto Rico," *The Sign* 17, no. 8, (March 1938): 457.

[114] For more information see, Briggs, *Reproducing Empire,* 109-141, Conrad Seipp, "Puerto Rico: A Social Laboratory," *The Lancet* 281, no. 7295 (June 22, 1963): 1364-8, and Michael Lapp, "The Rise and Fall of Puerto Rico as a Social Laboratory, 1945-1965," *Social Science History* 19, no.2 (Summer 1995): 169-199.

of the defendants in January 1939. In his decision, he cited *United States v. One Package of Japanese Pessaries,* which held that the law prohibiting contraception did not apply to methods "which might be intelligently employed by conscientious and competent physicians for the purpose of saving life or promoting the well-being of their patients."[115] Although the ruling did not provide a blanket exemption for contraception, it did recognize the legality of providing contraceptives or information for health-related reasons. Since most of the potential patients in Puerto Rico met these criteria, this ruling effectively legalized contraception on the island.

During this period of legal wrangling and public disputation, the MCHA continued to expand its clinic network. After Judge Cooper's decision, the Health Department established a maternal health service and sought the assistance of the MCHA. Dr. Belaval assumed medical direction of the program, and the MCHA offered support in the form of trained nurses and the services of supervisory personnel. This clinic system expanded rapidly until contraceptive advice was available throughout the island by the end of 1940.[116]

Gamble remained involved throughout this period and visited Puerto Rico in late 1937. He intended his visit to be an educational tour where he would meet representatives of local birth control groups and develop his own assessment of the situation on the island. He also planned to "get some pictures and motion pictures that could be used for money-raising purposes." Gamble asked Carmen Alvarado to find a "very large family living in a very small house" to provide the backdrop for his proposed advertising

[115] United States v One Package of Japanese Pessaries, 86 F.2d 737 (2nd Cir. 1936).

[116] Tietze and Alvarado, "Birth Control in Puerto Rico," 17.

campaign. He preferred to "find one (a family) which, after a series of closely spaced children had been given a vacation by the Asociacion."[117] No offer of remuneration is mentioned in the letter. In a revealing juxtaposition of Gamble's elite lifestyle and the grinding poverty of the women in his clinical trials, Gamble queried Alvarado to determine whether he would require a "tuxedo…with white shirt front" or if he could make do with a white suit for "formal evening gatherings" on his upcoming visit.[118]

Gamble often expressed his desire to test his favored foam powder and sponge method in Puerto Rico. He assumed that this method could be provided cheaply and safely with a high likelihood of success, despite the lack of available evidence to support this assumption. The studies he conducted on the island used multiple different contraceptive methods, and it is difficult to ascertain which products were used in individual clinics. This difficulty arises from the frequent substitutions of jellies and powders that were made based on cost, availability, and investigator's choice. Although he lacked evidence for the efficacy of the foam powder and sponge method, he worked to formulate a more effective powder and tested these new powders on Puerto Rican women.

Early in his involvement on the island, Gamble expressed concern about the high cost of available contraceptives and proposed a scheme to make the needed powder in Puerto Rico to decrease the cost. In 1937, he visited Berea, Kentucky, to evaluate the program there, which he viewed as a model for his work in Puerto Rico. He praised the Mountain Maternal Health League (MMHL) for making "good progress" but argued that

[117] Clarence J. Gamble to Carmen Alvarado, November 30, 1937, CGP, Box 45, Folder 736.

[118] Clarence J. Gamble to Carmen Alvarado, December 31, 1937, CGP, Box 45, Folder 736.

they could lower their costs to match the numbers he saw in Puerto Rico.[119] Gamble's efforts on the island for the next few years would be devoted to finding a cheap, effective foam powder contraceptive.

To create this desired powder, Gamble turned to Johnson & Johnson (J&J), a pharmaceutical company based in New Jersey. They were already involved in research on spermicidal powders and saw Gamble as a helpful collaborator in this research. In a letter, Gamble outlined his proposal for a stepwise research program. The first step involved testing the powder on dogs to demonstrate its lack of severe reactions when applied to mammalian mucosa. The second step would require "a few tests on human vaginas" to ensure the safety of the product "before extensive use." This step would be followed by a "test on a small scale for effectiveness," this step would be performed in Puerto Rico and women who were patients in the birth control clinics. If the medication passed these three tests, Gamble claimed that it would be ready for deployment on a large scale in Puerto Rico.[120] This program benefited both groups: Gamble could get access to a new and possibly more effective powder at a lower cost, while Johnson & Johnson could gain access to Puerto Rican women to test their new product. The pharmaceutical company agreed to this plan and also allowed Gamble to publish the results of the planned study.[121]

Although the planned cooperation with Johnson & Johnson was ongoing, Gamble continued to seek a better foam powder product. He purchased a powder mixing machine

[119] Clarence J. Gamble to Estella Torres, November 19, 1937, CGP, Box 45, Folder 736.

[120] Clarence J. Gamble to Dr. Daiell, October 15, 1937, CGP, Box 45, Folder 737.

[121] Dr. Daiell to Clarence Gamble, December 9, 1937, CGP, Box 45, Folder 737.

for the MCHA and provided the essential ingredients for a spermicidal powder for them to mix on the island.[122] The exact formula for the mixture is unknown, but the active ingredient was paraformaldehyde, a chemical now listed as a probable human carcinogen. It is also known to cause mutagenic and reproductive problems with long-term exposure.[123] None of the published reports of Gamble's activities in Puerto Rico mention this mixture or provide any evidence of its efficacy or toxicity. It is unclear whether patients were ever exposed to this powder. Its deployment may have been forestalled by the availability of the Johnson & Johnson powder and Gamble's eagerness to test this new mixture.

Gamble contacted Belaval in June 1938 to inform him of the preliminary test results for the J&J powder. The powder was tested on dogs and humans and passed all the tests. From these results, Gamble was able to assure Belaval "that the powder is safe for human use." He also vouched for the spermicidal activity of the powder and encouraged its adoption in the insular birth control clinics.[124] The powder was distributed to the clinics, and Gamble was satisfied with the results. He concluded "that the powder clearly merits inclusion in the armamentarium needed by the physician seeking to protect underprivileged patients against the chance of conception."[125] Gamble's support of the product appears to have been unduly optimistic as other researchers were less enthusiastic

[122] Carmen Alvarado to Dr. Gamble, March 28, 1938, CGP, Box 45, Folder 740.

[123] "Paraformaldehyde Material Safety Data Sheet," https://proscitech.com/msds/c007.pdf, Accessed April 27, 2017.

[124] Clarence J. Gamble to Jose S. Belaval, June 2, 1938, CGP, Box 45, Folder 741.

[125] Clarence J. Gamble to Gilbert Beebe, March 24, 1941, CGP, Box 45, Folder 753.

about the new powder.[126]

Gamble also attempted to test other methods of contraception in Puerto Rico during this period. He discussed the possibility of testing an injectable contraceptive that purported to induce an immune reaction to spermatozoa in the women that received the injections. This serum was undergoing preliminary tests at the University of Pennsylvania, and Gamble sought to hasten its testing by making Puerto Rican women available as research subjects.[127] This testing never occurred, but Gamble persisted in his search for alternate contraceptives.

In 1941, he corresponded with Dr. Charis Gould at the Presbyterian Hospital in San Juan about another potential contraceptive. From the letters they exchanged, it appears that this medication was an early oral contraceptive based on the concerns Gould expressed in her letter to Gamble. She was responsible for performing endometrial biopsies on the women that were receiving this drug from Dr. Belaval. Gould worried that many of the women were avoiding the recommended biopsies, depriving the researchers of the information they needed to assess the drug's safety, efficacy, and mechanism of action.[128] Gamble replied that he was "not especially interested in learning the mechanism through which it (the experimental contraceptive) works" until "we can get some information as to whether it is effective." He was also concerned about the lack of enthusiasm for the new drug among women and advised Gould that "perhaps Dr.

[126] Gilbert Beebe to Clarence Gamble, October 28, 1939, CGP, Box 46, Folder 748.

[127] Clarence J. Gamble to Jose Belaval, June 22, 1938, CGP, Box 45, Folder 741.

[128] Charis Gould to Clarence Gamble, July 17, 1941, CGP, Box 46, Folder 752.

Belaval is working too high on the social scale."[129] These statements demonstrate a couple of common themes in Gamble's comments about research. First, he was a pragmatic researcher in that he was more concerned with the efficacy of the medication in question but had less interest in the basic science of the mechanism of action and other effects the medication may have had. Second, he chose to perform his studies among women of lower socioeconomic standing and, presumably, lower intelligence. The reason for this preference is unclear, but it is reasonable to assume that Gamble sought to perform his studies among women that he thought would be less likely to question his authority and more likely to accept his advice.

There is no evidence that the women gave consent to participate in these studies or were ever informed that they were receiving an untested or experimental therapy. Standards for consent and education for clinical trials were much different in the 1930s and 1940s than they are today. Still, Gamble appears to have violated the less stringent contemporary standards for ethical medical research. In 1907, Dr. William Osler outlined the requirements for ethical human experimentation. He expected that physicians would obtain "full consent" from experimental subjects and that participants should have "full knowledge of the circumstances" of the research.[130]

During this period, clinical research in the United States was not closely regulated by statute, but there were clear guidelines that were recognized by the medical community. In her book, *Subjected to Science,* historian Susan Lederer argued that "before 1930, researchers observed limits in their experiments with human subjects" and

[129] Clarence J. Gamble to Charis Gould, August 12, 1941, CGP, Box 46, Folder 752.

[130] William Osler, "Evolution of the Idea of Experiment in Medicine," *Transactions of the Congress of American Physicians and Surgeons* 7 (1907): 7.

"ethical guidelines influenced the conduct of research with both human and animal subjects in the decades before World War II."[131] Although these ethical guidelines were not always explicit, many physicians shared a common set of beliefs that informed their research practices. Sociologist Sydney Halpern argued for the existence of an "indigenous morality" that informed medical research. He defined this concept as "moral traditions governing the introduction of new medical interventions before the advent of federal regulation and formal bioethics."[132] In his studies in Puerto Rico, Clarence Gamble and his associates did not adhere to the minimal standards in place at the time. They conducted medical research on patients who were not informed of the risks entailed in their participation in this research.

In 1938, Gamble cooperated with Gould and Belaval to publish an interim analysis of their experience in Puerto Rico. They compared results from three different methods of contraception: diaphragms with contraceptive jelly, contraceptive jelly alone, and foam powder with a sponge. The powder used in this study was produced by Stoughton Pharmaceuticals and differed in composition from the Johnson and Johnson powder. The three methods were found to be roughly equivalent in decreasing the risk of pregnancy, but the sample size was too small to differentiate between the methods.[133] This interim analysis provided no useful information about the program or the effectiveness of the contraceptive methods.

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[131] Susan E. Lederer, *Subjected to Science: Human Experimentation in America Before the Second World War* (Baltimore: The Johns Hopkins University Press, 1995), xv.

[132] Sydney A. Halpern, *Lesser Harms: The Morality of Risk in Medical Research* (Chicago: University of Chicago Press, 2004), 2-3.

[133] Jose Belaval, Charis Gould, and Clarence Gamble, "The Effectiveness of Contraceptive Advice Among the Underprivileged of Puerto Rico," *Journal of Contraception* 3, no.12 (December 1938): 227.

In 1939, statistician Gilbert Beebe came to Puerto Rico to review the accumulated data to consider whether the program was achieving its goals. After meeting with representatives from the PRRA and MCHA, he informed Gamble that the program was in crisis due to a lack of personnel and poor data collection practices. He recommended either abandoning the program altogether, limiting its scope, or obtaining funding for more personnel to help configure the data into a more accessible format.[134] Beebe further explained his concerns to Gamble in two letters in March 1939. He despaired of being able to draw any clear conclusions from the data except that he expected "the analysis to make it clear that advice without follow-up probably has no more than slight educational value." No clear decision on the effects of the tested contraceptives was thought to be possible, and Beebe was noncommittal as to whether he could provide anything useful except for "**estimates** (emphasis mine) of the risk of pregnancy with each of the three methods."[135]

Gilbert Beebe was a doctoral candidate in sociology and statistics at Columbia University and planned to use the data from Gamble's birth control trials as the basis for his dissertation. After examining the Puerto Rico results, he informed Gamble that he would use the Logan County, WV trial data because he considered it more valuable and complete. Beebe also found it necessary to ensure that Gamble would allow him to pursue his conclusions freely without interference. Beebe wrote, "I must feel that I am perfectly free to examine what facts I can obtain and to reach whatever conclusions those facts seem to force upon me. Perhaps it is unnecessary to bring this matter up, but it

[134] Gilbert Beebe, "Memorandum on the Status of the Puerto Rico Project," February 24, 1939, CGP, Box 46, Folder 748.

[135] Gilbert Beebe to Clarence Gamble, March 2, 1939, CGP, Box 46, Folder 748.

seems wise to me."[136] He also performed a final review of the Puerto Rico foam powder data and his conclusion that "it is highly desirable that at least a few of any similar series instituted in the future should be so designed that conclusions of greater value might be forthcoming" can be read as a critique of Gamble's research methodology and lack of focus.[137] It is likely a measure of the estrangement that developed between Beebe and Gamble that the final article published from the Puerto Rico studies was authored by Beebe and Belaval, with Gamble's name notably absent.[138]

After fifteen years of birth control activism on the island, little medical progress had been made by birth control advocates. They were successful in publicizing their issues and changing the laws that had previously restricted their efforts. The island was dotted with numerous clinics that provided maternal health and birth control advice, and these clinics would prove influential in future birth control efforts in Puerto Rico. Those developments would be delayed by the coming of World War II, which severely curtailed birth control activities.

## "The Jibaros Like to Paste Birth Certificates on the Wall": Birth Control in Puerto Rico After World War II

World War II brought enormous changes to Puerto Rico. The island became an important American military outpost, and German submarine activity threatened shipping that was vital to the island's economy, making it difficult to receive shipments of food and other supplies. The nurses from the MCHA were enlisted into the war effort while

[136] Gilbert Beebe to Clarence Gamble, March 4, 1939, CGP, Box 46, Folder 748.

[137] Gilbert Beebe to Clarence Gamble, October 28, 1939, CGP, Box 46, Folder 748.

[138] Gilbert W. Beebe and Jose S. Belaval, "Fertility and Contraception in Puerto Rico," *Puerto Rico Journal of Public Health and Tropical Medicine* 18, no. 1 (1942): 3.

the overburdened public health nurses added maternal health duties to their growing list of responsibilities. A lack of trained personnel crippled follow-up work and data collection. Although some contraceptive work continued during the war years, the program lost any momentum it possessed in the inevitable disruptions of that period.[139]

The American birth control movement on the mainland slowed and nearly stopped during the war. Many of the medical personnel were needed for military duty and supplies and funding became scarce because of the needs of the war economy. Clarence Gamble took a temporary appointment with the Harvard Medical School, teaching physical diagnosis to medical students as a replacement for a tenured professor who had been pressed into military duty.[140] Margaret Sanger spent the war in Tucson, Arizona devoting her time to painting and local causes. Gamble wrote her in 1942 asking if she was content to remain inactive while "the mothers of the country need you?"[141] Seeming to acquiesce to the war's enforced inactivity, she chose to look forward to contemplated postwar work in China and India.[142]

After the war, Gamble reestablished contact with birth control workers on the island. He agreed that the prewar efforts had made little difference in the birth rate and advocated for the formation of a new organization instead of reviving the MCHA. He based this recommendation on his concern that the old organization might provoke more

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[139] Tietze and Alvarado, "Birth Control in Puerto Rico," 17.

[140] Williams, *Every Child a Wanted Child,* 174.

[141] Clarence Gamble to Margaret Sanger, December 2, 1942, Margaret Sanger Papers (Microfilm), Library of Congress.

[142] Margaret Sanger to Clarence Gamble, n.d., Margaret Sanger Papers (Microfilm), Library of Congress.

opposition from the Catholic Church since its name was synonymous with birth control in Puerto Rico. An organization with "poblacion" in the title seemed preferable to him since it focused on the "population problem" instead of contraception. He also asserted that an organization so named would be more successful in garnering funding from large foundations.[143]

In a July 1946 letter to Dr. Belaval, Gamble presented his ideas for the anticipated study. He proposed an "intensive experiment in population control" with 10,000 participants. Women would be offered their choice of various birth control methods, including condoms, foam powder, diaphragms, and sterilization. Patients would be followed by a supervising physician and a team of nurses. A plan to employ a man to make home visits to educate men was included in the proposal.[144] The schema for this study seemed to indicate a change in Gamble's thinking because he chose to include numerous contraceptive options for participants and expressed concern to perform a study with enough subjects to render statistically valid information. Belaval offered his "most heartly cooperation" for the new plan.[145]

Dr. Tietze and Gamble presented an outline of their proposal to the National Committee on Maternal Health (NCMH) on October 10, 1946.[146] They also applied to numerous foundations and outside funding agencies to obtain funding for the trial.[147] No

[143] Clarence J. Gamble to Mrs. Carlos Torres, July 30, 1946, CGP, Box 46, Folder 754.

[144] Clarence J. Gamble to Jose S. Belaval, July 30, 1946, CGP, Box 46, Folder 754.

[145] Jose S. Belaval to Clarence J. Gamble, August 21, 1946, CGP, Box 46, Folder 754.

[146] Christopher Tietze, "An Outline for an Experiment in Population Control," October 10, 1946, CGP, Box 46, Folder 755.

[147] Applications were submitted to the Markle Foundation, Rockefeller Foundation, and Macy Foundation among others. Clarence Gamble to John Russell, October 23, 1946, Clarence Gamble to G.K.

substantial funding was obtained despite their efforts and the backing of the NCMH. Due to this lack of interest and funding, the trial was never performed.

In preparation for the proposed trial, Tietze spent a month in Puerto Rico interviewing interested local supporters, medical personnel, and government officials. Most of the interviews dealt with practical issues commonly encountered in clinical trials, such as funding, staffing, and data collection. The rest of the interviews contain the opinions of the people that were interviewed about the prospects for birth control in Puerto Rico and the suitability of the local population for such a study. This latter group of interviews provides a record of the views of upper-class, educated Puerto Ricans about their less fortunate neighbors and their reproductive habits.

Many of the interviewees expressed concern that Puerto Ricans were sexually promiscuous and ignorant, making any attempt to popularize contraception difficult. On this topic, Dr. John Bierly, director of the Presbyterian Hospital in San Juan, claimed that Puerto Rican girls started their sex lives at a young age and that it was rare to find a poor girl who remained a virgin after age 11. He estimated that the average rural couple engaged in coitus twice a day and "that the old man comes so fast that the wife doesn't even have a chance to slip in a dose of jelly."[148] In his interview, Bierly parroted old themes of primitive tropical sexuality that complicated contraceptive work in Puerto Rico.

Jose L. Janer, a government official in charge of vital statistics, claimed that birth registration was more accurate in rural areas because "jibaros like to paste the birth

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Strode, October 23, 1946, Frank Fremont-Smith to Clarence Gamble, November 8, 1946, CGP, Box 46, Folder 755.

[148] Report #2, September 18, 1946, CGP, Box 46, Folder 756.

certificates on the wall."[149] His claim furthers the idea that rural peasants have no interest in contraception, preferring to prove their fertility by producing large broods of children. Carlos Torres worried that Puerto Ricans resisted birth control efforts because many island residents felt that American interests pushed birth control "because there are too many Puerto Ricans." Even Luis Munoz Marin was interviewed by Tietze. Munoz Marin, now the President of the island's senate, demonstrated his continued interest in birth control. He described the problem in the sterile language of government bureaucrats, framing the issue as "a lack of equilibrium between population and resources."[150]

The need for a more straightforward form of birth control also resonates through the interviews. Sterilization was often preferred over contraception because many women liked its permanence and saw sterilization as the less sinful of the two options. One anthropologist argued that Catholic women chose sterilization because the operation entailed only one sin while ongoing use of birth control entailed repeated offenses.[151] Others hoped for new injectable contraceptives because "the peon class love injections."[152] Many of the respondents blamed the trial participants for the lack of success. This opinion was also repeated in published accounts of the insular birth control efforts.

During the war, Beebe and Belaval had published the data from their prewar experience in Puerto Rico. In the conclusion, they blamed their lack of success on the

[149] Report #1, September 17, 1946, CGP, Box 46, Folder 756.

[150] Report #19, October 19,1946, CGP, Box 46, Folder 756.

[151] Report #7, September 24, 1946, CGP, Box 46, Folder 756.

[152] Report #18, October 8, 1946, Box 46, Folder 756.

inability and unwillingness of the study subjects to follow the study protocol when they wrote that the conditions for success "simply are not met by the living conditions and aspirations of these patients."[153] In 1947, anthropologist Marguerite King blamed the failure of previous contraceptive programs on the patient's lack of willingness to "adopt birth control practices which entail personal sacrifices."[154]

## Conclusion

The American birth control movement focused intense interest on Puerto Rico from the early 1930s until 1950. During this period, they conducted numerous clinical trials and provided contraceptive education and services to more than 10,000 Puerto Rican women. In some ways, their results in Puerto Rico mirrored their prior experience in Appalachia. In other ways, Puerto Rico provided different challenges and taught different lessons than they had previously experienced.

On the most basic level, the Puerto Rican trials were unsuccessful. The researchers did not achieve any important breakthroughs, and most of the studies produced only marginally useful data. The birth rate remained unchanged at 40 births per 1,000 inhabitants from 1900-1945.[155] There is no evidence that the availability of contraception made any difference in these numbers. Critics of the birth control movement argued that it was impossible to lower the birth rate appreciably under contemporary social and economic conditions. Proponents countered that there had never

[153] Beebe and Belaval, "Fertility and Contraception in Puerto Rico," 52.

[154] Marguerite N. King, "Cultural Aspects of Birth Control in Puerto Rico," *Human Biology* 20, no. 1 (February 1948): 35.

[155] Tietze and Alvarado, "Birth Control in Puerto Rico," 23.

been a comprehensive education program to supplement the contraceptive clinics, envisioning a plan similar to the plan proposed by Gamble and Tietze in 1946.

In contrast to the experience in Appalachia, Puerto Rico had a history of birth control advocacy and service before American birth control organizations became involved. Because of this, the interface between the island's birth control advocates and the mainland birth control movement was often difficult. Some of this difficulty arose from the attitudes that Gamble and his colleagues brought to their work and their lack of accurate knowledge about Puerto Rican society and culture. They also transplanted many of their ongoing feuds from the mainland and played them out against the backdrop of Puerto Rico, often placing insular birth control workers in an untenable situation. Indeed, many of the problems they encountered were self-inflicted, worsened by their lack of sensitivity to local mores and customs.

The difficulties with the Catholic Church also provide a crucial difference between the Appalachian and Puerto Rican experiences. Catholics were a minority in Appalachia, and as such, they offered almost no resistance to the Logan County and Berea trials. Anticipated opposition from other religious groups never materialized either. In Puerto Rico, Catholic resistance was frequent and contentious. The Puerto Rican effort was hampered by Catholic opposition, but much of the trouble arose from mainland instead of insular sources. This fact seems paradoxical because Puerto Rico is an almost entirely Catholic territory while Catholics were not in the majority on the mainland. It appears that mainland Catholics were more vehement in their opposition to birth control, while Catholics on the island were often willing to turn a blind eye to contraceptive efforts. This might be explained by the overwhelmingly Catholic nature of Puerto Rican

culture; the church there, unlike the mainland church, never felt existentially threatened by social changes because they had never had the experience as a minority faith in a pluralistic religious marketplace.

The increasing prevalence of female sterilization also confounded birth control efforts in Puerto Rico. Sterilization is an effective but largely irreversible form of birth control, and during this period, the procedure carried substantial surgical and anesthetic risk. There is no evidence that the American birth control advocates or their affiliated organizations performed sterilizations during this period, despite the procedure's increasing popularity on the island. Clarence Gamble heard rumors of a mass sterilization program, but he could find no evidence for its existence when Tietze conducted his field interviews in 1946. Intrigued by the possibilities, Gamble offered to provide funding for such a program, but his offer was rebuffed by Jose Belaval because "no official provision for the sterilization of women has been set up in the District Hospitals of the island."[156]

Female sterilization in Puerto Rico has been an issue of contention among scholars and activists since the 1970s. As the procedure's popularity grew, questions arose about its purpose and utility and whether poor women were being victimized by forced sterilization procedures. A documentary, *La Operacion,* made explicit the ties between US policies that encouraged Puerto Rican industrial development and the popularity of sterilization. The creation of a reliable female workforce was enabled by ensuring that many of the workers underwent the sterilization procedure to eliminate the possibility of pregnancy and resultant workforce disturbances.[157] Radical activist scholars

[156] Jose Belaval to Clarence J. Gamble, August 21, 1946, CGP, Box 46, Folder 754.

[157] *La Operacion*, directed by Ana Maria Garcia (New York: Cinema Guild, 1982).

carried the criticism further, accusing US aid organizations of engineering a Puerto Rican genocide ostensibly to avoid further massive emigration of Puerto Ricans to the United States.[158]

Although there were abuses in the sterilization program in Puerto Rico, there is not sufficient evidence for genocidal intent from mainland researchers. Many women who underwent the sterilization procedure understood the risks and benefits and chose to be sterilized once they had created their families. The agency of these women cannot be ignored, although it is fair to question whether they were in a position to exercise free choice on these matters. Iris Lopez argued for the concept of "restrained choice" for the women she interviewed, recognizing the constraints they faced and refusing to depict them as passive victims as they made reproductive choices that allowed them to pursue their lives free of the burden of further childbearing.[159]

Puerto Rico, in many ways, represents an intermediate phase in the efforts of Clarence Gamble and his collaborators. The methods they considered to be successful in Appalachia produced inferior results in Puerto Rico, and the need for new, more effective methods became more apparent. The project's beginnings to create more effective contraceptives occurred here during this period, but it would be several years before American birth control advocates returned to the island to test an oral contraceptive pill. In the interim, they focused their efforts on India, a less hospitable and more foreign environment than they had previously faced. Despite the obvious differences, Gamble

[158] Iris Morales Luciano, "Puerto Rican Genocide," *Palante* 2 (May 1970): 8-9.

[159] Iris Lopez, "Agency and Constraint: Sterilization and Reproductive Freedom among Puerto Rican Women in Puerto Rico," *Urban Anthropology* 22, no. 3-4 (Fall 1993): 299-324. For further information on this topic see, Iris Lopez, *Matters of Choice: Puerto Rican Women's Struggle for Reproductive Freedom* (New Brunswick: Rutgers University Press, 2008), 142-156, and Briggs, *Reproducing Empire*, 142-160.

viewed Puerto Rico as a "miniature India" and saw his recently completed work there as adequate preparation for the upcoming project.[160]

[160] "Puerto Rico: A Miniature India," n.d., CGP, Box 46, Folder 751; Christopher Tietze, "An Outline for an Experiment in Population Control," October 10, 1946, CGP, Box 46, Folder 755.

## Chapter Four: India

Although they remained engaged with their work in Puerto Rico, and to a lesser extent, Appalachia, American birth control advocates began expanding their efforts to other areas in the 1930s. India emerged as a prime target for more research and advocacy as birth control activists expressed concerns about overpopulation and racial degradation. These concerns encouraged American birth control advocates to conduct clinical trials and provide contraceptive services throughout the subcontinent through the next three decades.

India provided many challenges, and most of them were different, in either kind or degree, from those faced in Appalachia and Puerto Rico. Despite the differences, there were some familiar similarities. India was a poor country, but poverty there was more prevalent and intense than that seen in Puerto Rico and Appalachia. India was also a very rural country, although there were also populous cities not found in the previously studied areas. India was also beset with a high birth rate and increasing population that appeared to be outstripping available resources.

Although India appeared familiar on some parameters, American birth control advocates were confronting a culture and society they were woefully unprepared to encounter. India differed from the familiar territories of Appalachia and Puerto Rico in multiple ways, including culture, language, race, and religion. Each of these differences presented specific challenges to effective birth control advocacy and made progress difficult for American researchers.

In India, for the first time, American birth control activists were forced to cooperate with their counterparts from another country. The British were

accustomed to working in India and provided a vital storehouse of knowledge about the country and its people. Most of the encounters between American and British researchers were cooperative, but there were also episodes of competition and acrimony that created more difficulties for their work. This mixture of cooperation and competition both increased and limited the chances of success for birth control advocacy in India.

In reality, American birth control advocates knew very little about India and its people. What they thought they knew was dangerously inaccurate and informed by *Mother India,* a polemical diatribe from 1927 that rapidly achieved unusual notoriety in the United States. The author, Katherine Mayo, was a white nationalist and anti-Catholic activist who described her motivation to write the book by proclaiming that she is "merely an ordinary American citizen seeking test facts to lay before my own people."[399]

In her book, Mayo argued that India was a menace to the rest of the world because the contagion of Indian culture was liable to spread to other nations if they were not inoculated against it by the knowledge that she supplied. She focused her analysis on the sexual, religious, and hygienic practices of the Indian people, who she depicted as monolithically Hindu, ignoring the country's religious diversity.[400] Although the author was dedicated to creating a negative impression of India and its people, her work achieved notable popularity. *Mother India* was reprinted nine times in the first year after publication, and it remained popular for years after. A Broadway musical, Madame Nazimova's *India,* was based on the book, and there

[399] Katherine Mayo, *Mother India* (New York: Blue Ribbon Books, 1927), 13.

[400] Asha Nadkarni, *Eugenic Feminism: Reproductive Nationalism in the United States and India* (Minneapolis: University of Minnesota Press, 2014), 99-100.

was serious discussion in Hollywood of adapting the book into a feature film.[401]

In its role as an international protector of women, Mayo also argued that the United States bore a vital responsibility to rescue Indian women from their servitude and degradation. Although the book incited fervent opposition, its basic tenets seemed to inform the beliefs of American birth control advocates in the upcoming decades.[402] These negative perceptions led to continued misunderstandings between birth control advocates and Indian women and doomed their efforts to failure from the start.

## India as A Colony

As the twentieth century dawned, the British Empire was at the zenith of its power throughout the world. Queen Victoria was nearing the end of her lengthy reign over an empire that encompassed one quarter of the earth's inhabitants and enormous parcels of land. India was her most important colony, and she had been proclaimed "Empress of India" amid grand celebrations in Delhi in 1877. Despite outward appearances of monolithic British power demonstrated by public celebration and fanfare, India was a complex colony composed of numerous ethnic and religious groups that both cooperated with and resisted its imperial rulers.[403]

The Indian colonial administration was a bureaucratic marvel, administering the massive, unwieldy colony for the benefit of the mother country. This bureaucracy oversaw several vital governmental functions, including taxation,

[401] Ibid., 99.

[402] Ibid., 100.

[403] David Cannadine, *Ornamentalism: How the British Saw Their Empire* (New York: Oxford University Press, 2001).

defense, trade regulation, and infrastructure. In addition to these essential functions, it undertook other less critical tasks that were nevertheless important to the smooth administration of the colony. First, the colonial medical establishment attempted to introduce Western medical thought and practice to India. Second, the Imperial Census gathered vital statistics about India's population to enable the British to administer the vast country. Each of these tasks served the purposes of the colonial authorities, but each also informed and encouraged the formation of an indigenous birth control movement.[404]

Although India had a rich tradition of indigenous medical knowledge and practice, the British considered Western medicine in general and British medicine, in particular, to be superior to its Indian counterparts. They based this judgment on the epidemics of infectious disease they witnessed and the chronic debility and early mortality they observed among the Indian people.[405] These observations reinforced their preexisting prejudices and encouraged the development of a Western medical establishment to protect British military forces and colonial officials from these risks.

Early in the colonial period, British authorities realized that India posed significant medical challenges for the establishment of imperial sovereignty over their possessions. Faced with new diseases and sanitary concerns, the East India Company assigned a surgeon to every ship bound for India as early as 1700. As the British increased their presence in India, the medical needs of company employees and military personnel also increased. Provincial medical boards were created in the

[404] Thomas R. Metcalf, *Ideologies of the Raj,* The New Cambridge History of India (Cambridge: Cambridge University Press, 1995).

[405] David Arnold, *The New Cambridge History of India,* vol. 3, *Science, Technology and Medicine in Colonial India* (Cambridge: Cambridge University Press, 2000), 57.

1780s to regulate medical practice and ensure discipline. These boards were largely ineffective, and in the aftermath of the Indian Uprising of 1857, colonial authorities replaced them with the Indian Medical Service (IMS) to ensure the availability of professional, Western medical services to colonial administrators and military personnel. [406]

The IMS was primarily a military service, and it provided medical officers for service anywhere they were needed within the British Empire. IMS officers served in all contemporary British military conflicts, earning multiple commendations for meritorious service. Notwithstanding its military mission, the IMS also established numerous medical schools in India. IMS personnel staffed these new medical schools until sufficiently trained graduates were available to assume their teaching roles.[407] In addition to their role in expanding medical education in India, IMS physicians are also credited with several significant scientific advances. In a 1918 speech, Surgeon General Sir William Rice Edwards claimed credit for the IMS for discovering "the life history of the malarial parasite" and working "out the method of transmission of bubonic plague, work which points the way to eradication of that disease."[408] Despite the apparent successes of the IMS, its methods and policies also fostered criticism among Indian subjects of the Empire.

The IMS maintained a policy of preferentially hiring British physicians

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[406] Ibid., 58.

[407] Donald McDonald, "The Indian Medical Service: A Short Account of its Achievements, 1600-1947," *Proceedings of the Royal Society of Medicine* 49, no. 1 (January 1956): 16.

[408] Ibid., 17; "Obituary: Sir William Rice Edwards, K.C.B., K.C.I.E., Late Director-General, Indian Medical Service," *The British Medical Journal* 2, no. 3277 (October 20,1923), 735.

throughout its history. Indian practitioners had few opportunities to enter the service, and when they did, they were relegated to subservient positions as assistants to British physicians.[409] The Indian physicians that attained these positions were trained in the medical schools run by the IMS. Although the IMS officials superficially praised native medical traditions and knowledge, their disdain for these traditions is apparent in their writings. The British editor of the *Indian Medical Gazette* described indigenous Indian medical practice as wanting "a scientific nomenclature of disease" because their ideas were "either fanciful…or unintelligible to the rest of the civilized world."[410] This dismissive attitude permeated the medical staff of the IMS and led to suspicion of its motives among the Indian population.

Much of the early scholarship about British colonial medicine focused on the diffusion model advanced by George Basalla in 1967. He argued for a three-stage process of knowledge diffusion from metropole to colony. In the first phase, Europeans established contact with new lands and people and used that contact to obtain scientific data about the colonized areas. This knowledge was transmitted back to the "civilized" metropole, where it could be assimilated into modern, scientific thought. In the second phase, "colonial scientists" began to participate in scientific work in the colony. Despite their presence in the colony, these scientists remained dependent on Europe for training and education. The third and final phase saw the establishment of an "independent scientific tradition" in the colonial possession. Political independence might occur during this period, but the creation

[409] Arnold, *Science, Technology and Medicine in Colonial India*, 61-2.

[410] Editorial, "A Plea for Hakeems," *Indian Medical Gazette* 3, no.4 (April 1, 1868): 88.

of national scientific institutions allowed for modern scientific research to thrive.[411]

The diffusion model provided a starting point for examining the transmission of Western scientific knowledge to India, but it was limited by several shortcomings. First, Basalla restricted his analysis to scientific research but excluded medicine and technology. Medicine, by definition, requires interaction between practitioners and patients; therefore, its diffusion would seem to differ from that of more basic sciences. Second, he ignored the differences between disparate colonial situations viewing settler colonies, such as Australia, through the same lens as "colonies of exploitation" such as India. Third, Basalla viewed the scientific exchange as flowing unilaterally from the more "modern" Western scientific establishment to the more "backward" colonial consumers of science. Despite its obvious appeal for its straightforward analysis and its reification of Western science, Basalla's model oversimplified the process of scientific knowledge diffusion.[412]

More recent scholarship has focused on an interchange of ideas between the metropole and colony while taking into account the uneven power distribution between the two societies. In a 2006 essay, Poonam Bala and Amy Kaler delineated the co-evolution of biomedicine and colonialism, describing the interaction as the "mutually constitutive nature of medicine and colonialism." Colonial acquisitions provided opportunities for the exportation of Western medical ideas and technologies. The presence of British colonists in India provided the impetus for Western medical expansion because the British needed to ensure a healthy workforce and to protect their colonists from newly encountered native

[411] George Basalla, "The Spread of Western Science," *Science* 156, no. 3775 (May 5, 1967): 611-22.

[412] Ibid.

pathogens.[413] The authors recognized the importance of colonial ideas on the development of new medical specialties, especially the discipline of tropical medicine, which developed to provide medical knowledge about specific problems encountered in equatorial colonial possessions.[414] Although this new medical knowledge was ostensibly developed in response to colonial conditions, it also operated to make the colonial enterprise possible.[415]

David Arnold observed that "medicine occupied a central place in Western scientific thought and activity in nineteenth-century India."[416] He presented three reasons for the importance of medicine in the colonial project in India. First, the Indian Medical Service functioned as one of the primary scientific agencies in India. East India Company physicians and their later counterparts branched out from their medical roots and studied botany, geology, zoology, and meteorology, among other fields. Much of the scientific information obtained during this period was provided by these physicians moonlighting as basic scientists in other fields. Second, medical personnel played a significant role in mapping the Indian environment and the interactions between the natural environment and the human condition in India. Third, medicine allowed for direct encounters and interventions in the lives of Indians. This set medicine apart from other scientific endeavors and allowed for unprecedented contact between metropolitan scientists and colonial subjects. These three factors helped create a distinctive version of medicine in colonial India and

[413] Poonam Bala and Amy Kaler, "Contested 'Ventures': Explaining Biomedicine in Colonial Contexts," in *Biomedicine as a Contested Site: Some Revelations in Imperial Contexts,* ed. Poonam Bala (Plymouth, UK: Lexington Books, 2009), 1.

[414] Helen Power, "The Calcutta School of Tropical Medicine: Institutionalizing Medical Research in the Periphery," *Medical History* 40 (1996): 198.

[415] Bala and Kaler, "Contested Ventures," 1.

[416] Arnold, *Science, Technology and Medicine in Colonial India*, 57.

shaped how it was received and assimilated by the Indian population.[417]

Because the IMS did not admit female physicians, the Association for Medical Women in India (AMWI) began advocating for the creation of a women's medical counterpart to the IMS in the early twentieth century.[418] In a letter to the Viceroy, the AMWI requested that the imperial government assume control of women's medical services from the voluntary associations tasked to provide it previously.[419] These voluntary associations, including the Countess Dufferin Fund and other smaller groups, struggled to provide medical services to Indian women through voluntary donations. These associations also recruited female physicians because of a presumed cultural preference for female providers among Indian women.[420] It quickly became apparent that these groups were not adequately equipped or funded to meet the immense medical needs of Indian women. In an editorial in the *Journal of Medical Women in India,* Dr. Annette Benson argued that the imperial government viewed Indian women's medical needs as "of so little consequence [that provision] is left to charitable contributions."[421]

Although the AMWI purported to speak for all female doctors in India, its membership and leadership were dominated by white British physicians.[422] In its

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[417] Ibid.

[418] Samiksha Sehrawat, *Colonial Medical Care in North India: Gender, State, and Society, c. 1830-1920,* (Oxford: Oxford University Press, 2014), 158.

[419] Benson to Lord Hardinge, December 26, 1911, *Journal of the Association of Medical Women in India* 3, no. 5 (February 1912): 15; "General Notes," August, 1912, *Journal of the Association of Medical Women in India* 3, no. 7 (August 1912): 36.

[420] Sanjam Ahluwalia, *Reproductive Restraints: Birth Control in India, 1877-1947* (Urbana: University of Illinois Press, 2008), 144.

[421] "Editorial," *Journal of the Association of Medical Women in India* 1, no. 4 (November 1908): 2. JAMWI, Nov. 1908, vol. 1, no. 4, p. 2.

[422] Samiksha Sehrawat, "Feminising Empire: The Association of Medical Women in India and the Campaign to Found a Women's Medical Service," *Social Scientist* 41, no. 5-6 (May-June 2013): 68.

publications, Indian women were often portrayed as helpless victims of a hostile culture that oppressed them and ignored their medical needs.[423] The AMWI campaign to create a new women's medical service was successful, and the Women's Medical Service in India (WMSI) was founded in 1913.[424]

The WMSI did have some success providing medical services to Indian women and training them as physicians and medical workers. Instead of replacing the Dufferin Fund and other voluntary associations, the WMSI worked cooperatively with these organizations, which continued to function as before.[425] The cooperation between these groups increased the availability of medical services to Indian women, but it also allowed the colonial government to meet its primary goal of limiting expenditures and avoiding undue burdens on the treasury.[426] Despite their stated interest in providing maternal care to Indian mothers, there is no evidence that these groups participated in any contraceptive work or research.

Although the male dominated IMS was often criticized for its lack of interest in providing care for Indian women, some IMS physicians expressed an interest in providing contraceptive services. Walter Hugh Crichton, an IMS physician, created what he thought was the "first family…birth control clinic in the north of India at the time (1938)." He credited "an American lady who'd come to India somewhere about…1920" for inspiring him to create this clinic. Crichton perceived a need for birth control while working in India, and he enthusiastically adopted what he

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[423] Ibid; Antoinette Burton, *Burdens of History: British Feminists, Indian Women, and Imperial Culture, 1865-1915* (Chapel Hill: University of North Carolina Press, 1994), 116-7.

[424] Sehrawat, *Colonial Medical Care in North India,* 157.

[425] Ibid., 186.

[426] Ibid., 187.

described as "a perfectly simple method" to administer to his patients, but he did not further specify the method he chose. He revealed his understanding of India and the difficulty he faced in providing contraceptives to Indian women when he hired a female Indian physician and female staffers to make the clinic acceptable to his Indian patients. Crichton also showed concern about opposition from men "because they did not want any control over the birth of children." He viewed male opposition in economic terms because Indian men do not "take out a life insurance like we do, but he takes out a life insurance in children who will work for him and keep him when he is aged and can't work any longer."[427] Crichton's foray into contraceptive work was unusual, but his beliefs reflect common beliefs among his British medical peers of the era.

Despite the importance of the colonial medical services, the Census of India had more profound influences on the incipient birth control movement. The call for a census to count and classify the residents of India first appeared in 1807, when the Directors of the East India Company recommended that a statistical survey of the colony be performed.[428] The Company periodically renewed calls for a census until the Mutiny of 1857 led to its dissolution. Shortly thereafter, colonial authorities revisited the idea but postponed the census indefinitely because of continued unrest in the country.[429] By 1870, colonial authorities believed that civil discord had

[427] Colonel Walter Hugh Crichton, interview by Charles Allen, 1972-1974, interview OA1/20/T, Plain Tales from the Raj Oral History Collection, transcript, School of Oriental and African Studies, University of London, London.

[428] William Wilson Hunter, *India – The Imperial Gazetteer* (London: Trubner, 1881): 1.

[429] Richard B. Martin, "Bibliographic Notes on the Indian Census," in *The Census in British India: New Perspectives,* ed. N. Gerald Barrier (New Delhi: Manohar Publishers, 1981), 62.

decreased enough to allow for an accurate census.[430] After the original census in 1872, British authorities conducted decennial censuses of India through 1941.

The original census concentrated on the simple goal of enumerating the population of India. The data derived from the census was seen as the key to providing appropriate government guidance on "the growth rate and rate of increase of the population, sufficiency of food supplies, the incidence of local and imperial taxes, the organization of adequate judicial and police arrangements, the spread of education and public health measures."[431] Each of these objectives seems to reflect an appropriate concern of a government tasked with ensuring the welfare of its colonial subjects. Despite the seeming appropriateness of these objectives, the vast power differential between the colonizer and colonized has led to analyses that question the benign nature of the census and the uses of its data.

Scholars of the British Empire have explored the importance of the census and other forms of colonial knowledge-gathering. Initially, the census was seen as a statistical tool employed by colonial authorities to extend their administrative reach over their subjects and to assist the bureaucracy in planning necessary programs. These scholars viewed the Empire as a creation of economic forces and high politics and the interactions between these forces. These analyses tended to deny any agency to colonized subjects by ignoring any influence they might wield in controlling the world in which they lived and worked.[432]

More recently, other scholars challenged these ideas by applying a multi-

[430] "Reply to the Home Department to the Government of India," November 16, 1870, in *Indian Census through a Hundred Years,* ed. D. Natarajan (New Delhi: Office of the Registrar General, 1972), 3.

[431] H. Beverley, *Report of the Census of Bengal, 1872* (Calcutta: Bengal Secretariat Press, 1872), 1.

[432] Simon J. Potter, *British Imperial History,* Theory and History (London: Palgrave, 2015), 33.

disciplinary approach incorporating techniques from history, literary studies, anthropology, and gender studies to their analyses. From this "cultural turn," a new synthesis emerged that "radically reimagined empire, reading it not simply as a set of economic and political structures of dominance but as a cultural project."[433] This new synthesis expanded the scope of the history of empire to include the consideration of "colonial knowledge" and the role that this knowledge played in the creation, exploitation, and governance of colonial societies.[434]

The philosophical underpinnings of this shift emanate from the work of Michel Foucault. Foucault theorized that "knowledge was both an effect and an instrument of power."[435] From this idea, he developed the concept of governmentality. Governmentality postulated that the state was able to exert power over the individual through "pervasive forms of surveillance and classification and the control of information and knowledge."[436] This power was enacted through institutions such as families, schools, and clinics; through discourse of academic disciplines such as history, statistics, and medicine; and through information gathering and control systems such as censuses and surveys.[437] In Foucault's analysis, these structures did not require coercion to function if individuals were taught to regulate their own behaviors in ways that served the purposes of the

[433] Tony Ballantyne, "Colonial Knowledge," in *The British Empire: Themes and Perspectives,* ed. Sarah E. Stockwell (Oxford: Blackwell Publishing, 2008), 177.

[434] Ibid., 178.

[435] Nicholas B. Dirks, *Castes of Mind: Colonialism and the making of Modern India,* (Princeton: Princeton University Press, 2001), ix.

[436] Potter, 55.

[437] Ibid., 56.

state.[438]

Foucault viewed the census as a vital part in the construction of the concept of population. Foucault theorized that "one of the great innovations in the techniques of power in the eighteenth century was emergence of 'population' as an economic and political problem."[439] He further elaborated on this concept by stating that "governments perceived that they were not dealing simply with subjects, or even a 'people' but with a 'population.'"[440] Once the concept of population was realized, populations became the entities upon which governmental attention and surveillance were focused as the individual and the family unit waned in importance.[441] Therefore, the census became the primary mechanism for collecting knowledge about the population instead of a simple exercise in data gathering.

Edward Said drew upon Foucault's ideas about colonial knowledge when he presented his arguments about Orientalism. Said argued that Orientalist ideas among India's British colonizers led them to view India as an exotic, uncivilized place that required British conquest and rule. Because imperial authorities saw their Indian subjects as radically different from themselves, they could justify their domination and exploitation of India. Orientalist thought even pervaded scientific and statistical projects, such as the census. Although census reports contained presumably neutral statistics, their interpretation served to "establish the power of the colonial master over the indigenous subject."[442]

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[438] Michel Foucault, "Governmentality," in *The Foucault Effect: Studies in Governmentality,"* ed. Graham Burchell, Colin Gordon, and Peter Miller (Chicago: University of Chicago Press, 1991), 87-104.

[439] Michel Foucault, *The History of Sexuality* (New York: Pantheon Books, 1978), 25.

[440] Ibid.

[441] Foucault, "Governmentality," 100.

[442] Edward W. Said, *Orientalism,* 25th Anniversary Edition, (New York: Vintage Books, 1979).

Anthropologist Bernard Cohn employed a similar argument in his work on the creation and deployment of colonial knowledge. Cohn's work emphasized the colonial state's role in creating and deploying knowledge to strengthen its control over colonial possessions and their subjects. He argued that "the conquest of India was a conquest of knowledge…converting Indian forms of knowledge into European objects."[443] Although Cohn wrote about colonial knowledge generally, he also focused his attention on the Indian census. Cohn maintained that the census not only provided statistical information to the British government but that it also forced Indians to confront how they defined their own social and cultural systems.[444]

Nicholas Dirks expanded on Cohn's argument claiming that "colonialism was made possible, and then sustained and strengthened, as much by cultural technologies of rule as it was by the more obvious and brutal modes of conquest that first established power on foreign shores."[445] Using the census as an example of a "cultural technology of rule," Dirks claimed that the Census of India had an important role in the creation of the contemporary caste system. Because the census forced Indian census respondents to define their caste, it reified the caste system as a primary determinant of social class and opportunity for the Indian people.[446]

The creation of a western medical system and the initiation of the census in India were important milestones in the expansion of British imperial power on the subcontinent. These programs increased government control and surveillance over

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[443] Bernard S. Cohn, *Colonialism and Its Forms of Knowledge: The British in India* (Princeton: Princeton University Press, 1996), 5-11.

[444] Bernard S. Cohn, "The Census, Social Structure and Objectification in South Asia," in *An Anthropologist among the Historians and Other Essays* (Oxford: Oxford University Press, 1996), 248.

[445] Dirks, 9.

[446] Ibid., 198-227; Padmanabh Samarendra, "Census in Colonial India and the Birth of Caste," *Economic and Political Weekly* 46, no. 33 (August 13-19, 2011): 51-8.

the Indian population as the British accrued more information about the culture and society. Each also provided an impetus to the incipient birth control movement and encouraged an indigenous Indian response to foreign involvement in Indian reproduction.

### "A Vast Garden…Choked with Weeds": Overpopulation in India

Unlike Appalachia and Puerto Rico, India possessed indigenous schools of medical thought that developed in isolation from Western medical practices. The best known of these systems, Ayurvedic medicine, arose from the Hindu religious tradition and became the dominant medical practice in most of India. Other traditions, such as the Siddha and Unani systems, were also commonly practiced in India. The available system varied according to the geographic location and religious beliefs of the patient and medical practitioner.[447]

Ayurvedic medicine fostered intense interest in issues of sexual functioning and reproduction. One of the eight specialties recognized among Ayurvedic practitioners is Vajikarna. Vajikarna is concerned with aphrodisiacs, male sexual function, and eugenics.[448] Although there is no female counterpart to the Vajikarna practitioner, Ayurvedic texts contain numerous prescriptions for female contraceptives. Vajikarna does encompass the treatment of women to increase their desire to submit to intercourse with their husbands, but the majority of the potions prescribed are intended for use by men.[449] These texts demonstrate an early and

[447] B. Ravishankar and V.J. Shukla, "Indian Systems of Medicine: A Brief Profile," *African Journal of Traditional, Complementary, and Alternative Medicines* 4, no. 3(2007): 319-321.

[448] P.K. Dala and Adarsh Tripathi and S.K. Gupta, "Vajikarna: Treatment of Sexual Dysfunctions Based on Indian Concepts," *Indian Journal of Psychiatry* 55, Suppl. 2(January 2013): 273-5.

[449] A.B. Bagde et al., "Vajikarna: A Unique Therapy of Ayurveda," *International Research Journal of Pharmacy* 4, no. 3(2013): 4-5.

acute interest in contraception in Indian medicine that was not seen in Western medicine until many centuries later.

Ayurvedic texts before 1000 CE presented three possible methods for birth control; abstinence, coitus interruptus, and reserving intercourse for a safe period.[450] No artificial or pharmacologic methods are described in these early texts. Knowledge of birth control was intended to assist in spacing pregnancies to allow for the mother's recovery before another pregnancy occurred. Spacing children was seen as a method of ensuring more robust progeny and improving the quality of the population in general. Population growth was not understood to be a problem, and birth control was directed at ensuring the quality of progeny instead of limiting the quantity.[451]

Later texts reflect a change in Ayurvedic teachings about birth control. This change is credited to outside influences that became prominent in the subcontinent during the 11th century.[452] Instead of advocating for abstinence or self-control, these later texts provide instruction for preparing more than thirty contraceptive potions. These concoctions contained bizarre ingredients such as three-year-old molasses, fly feet, and cow urine. Combined with botanical ingredients from native plants, these mixtures were purported to prevent conception, produce sterility, or induce abortion. None of these methods have been proven effective, and only three of those mentioned have any rational basis for efficacy.[453]

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[450] P.V. Tewari and C. Chaturvedi, "Method of Population Control in Ayurvedic Classics," *Ancient Science of Life* 1, no. 2(October – December 1981): 74.

[451] Ibid., 72.

[452] Ibid., 74.

[453]. Himes, *Medical History of Contraception,* 119-121.

Although the Ayurvedic manuscripts provide recipes for contraceptives, it is doubtful that Indian physicians or women would have been able to determine which of the recommended concoctions were effective. These women would inevitably experience failure of all these methods, and it would be logical for them to begin to believe that no method could be effective. Women would communicate this idea to other women, and a fatalistic attitude toward contraception could easily develop within a culture. This attitude persisted into the twentieth century in most areas of the world.[454] In India, steady population growth and periodic famines returned the issue to the public consciousness in the late 19th century.

In response to these issues, the Neo-Malthusian League was founded in London in 1877, and its ideas quickly spread to Britain's most important colony. Correspondents of the League were soon found throughout India in Bengal, Punjab, Delhi, Lucknow, and Patna. The Diwan of Mysore, C.V. Rangacharlu, presented his concerns about overpopulation and development in the Mysore State Legislative Assembly in 1881, and Murugesa Mudaliar of Madras and Muthiah Naidu of Pudukkottai in southern India were Vice-Presidents of the League by 1885.[455] Although there is evidence of birth control activism throughout India during this period, the focus of this activism was clearly in southern India with the organization of a Hindu-Malthusian League in 1882 in Madras.[456]

Swami Rama Tirtha, a teacher of the Hindu philosophy of Vedanta, also argued for population control in the late 19th and early 20th centuries. Rama Tirtha

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[454] Ibid., 121-1.

[455] Elfriede Vembu, "How Family Planning Came to India," *The Journal of Family Welfare* 1, no.5 (July 1955): 155-6.

[456] Ledbetter, *A History of the Malthusian League, 1877-1927*, 192.

was popular in the West and spent two years in the United States lecturing on Vedantic philosophy. He blamed India's rapidly growing population for the poverty he witnessed in his travels around northern India. Rama Tirtha linked India's population problem with a perceived lack of national unity when he wrote, "if the population problem is to be left unsolved, all talk about national unity…will remain a utopian chimera."[457] Rama Tirtha's writings demonstrate that ideas of overpopulation and population control were intertwined with nationalist thought from the outset. This association strengthened as the birth control movement in India grew.

Middle-class reformers led the next phase of birth control advocacy in India. They explicitly linked overpopulation, reproduction, and nationalism in their arguments. These reformers were uniformly male, as Indian women did not routinely participate in the public discourse around birth control until the early 1930's when the All India Women's Conference took up the issue.[458] These reformers and their writings brought sexual practices out of the private realm and made them an appropriate subject for public discussion and government intervention in the service of modernization and development goals. Reformers viewed overpopulation and rapid population growth as significant impediments to national unity and possible independence from Britain. Birth control was seen as a mechanism to solve these problems and advance nationalist goals.[459]

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[457] Raj Kumar Arora, *Swami Ram Tirath: His Life and Works* (New Delhi: Rajesh Publications, 1978), 29.

[458] Barbara N. Ramusack, "Embattled Advocates: The Debate Over Birth Control in India, 1920-40," *Journal of Women's History* 1, no. 2 (Fall 1989): 41-5.

[459] Sanjam Ahluwalia, *Reproductive Restraints: Birth Control in India, 1877-1947* (Urbana: University of Illinois Press, 2008), 28.

Much of the interest in overpopulation and birth control appears to have been engendered by the publication of the results of the 1911 census. M. Subraya Kamath, a Theosophist from Madras, published an analysis of this census in 1914.[460] The results of the 1911 census had been interpreted as showing a relative decline of Hindus as a proportion of the total population and a decrease in the proportion of females in the Hindu population. Kamath blamed various Hindu social customs, including early marriage, celibate widowhood, and the high infant mortality rate for this decline. He argued that the decreased proportion of females in Hindu communities was caused by epidemic diseases that affected females more severely than males and the lack of importance placed on the care of female children in Hindu families. He disputed the idea that Hindus frequently committed female infanticide and that the decrease in the female sex ratio was due to this practice.[461]

In 1916, P.K. Wattal, an accountant for the colonial government, published his analysis of India's population based on census data.[462] Wattal argued for the existence of a population problem in India constructed on Malthusian ideas. He was cognizant of the controversy surrounding previous interpretations of the census data and made sure to clarify his intentions when he wrote, "this essay should not be construed as an attack on the spiritual civilization of the country or even indirectly into a glorification of the materialism of the West."[463] Wattal argued that too many

[460] M. Subaya Kamath, *The Census of India: An Analysis and Criticism* (Adyar, Madras: Theosophical Publishing House, 1914).

[461] Ibid., 1; Rahul S. Nair, "The Discourse on Population in India, 1870-1960" (PhD diss., University of Pennsylvania, 2006), 69-70.

[462] P.K. Wattal, *The Population Problem in India: A Census Study* (Bombay: Bennett, Coleman, 1916).

[463] Ibid., ii.

children pushed families into poverty and contributed to the high death rate.[464] He conceded that current birth control methods were inadequate for the task and gave only a feeble recommendation for delayed marriage and abstinence as remedies for the problem.[465]

R.D. Karve, now recognized as a pioneer in birth control, published an influential work in 1921.[466] In this book, Karve explored the importance of birth control and the moral implications of its use in India. He adopted a Malthusian view on overpopulation and argued for the benefit of contraceptives to spare India the ravages of further population increase. Karve wrote from the position of an educated, upper-class Hindu male, but his writing contains some revolutionary arguments that went against orthodox thought among his peers. First, he depicted women as sexual beings with needs and desires distinct from those of their husbands. He viewed sexual continence as unnatural and unhealthy for both sexes, explaining that sexual activity should be considered an "exercise" that fitted the individual for proper function.[467] Second, Karve disputed the common idea that sexual intercourse was intrinsically immoral, arguing that the act itself was natural but that social mores and beliefs made it seem immoral, leading women to seek unsafe abortions or other dangerous remedies for unwanted pregnancies.[468] Third, he advocated using artificial contraceptive methods and corresponded with British

[464] Ibid., 14.

[465] Ibid., 24.

[466] R.D. Karve, *Morality and Birth Control: Theory and Practice* (Bombay: Servants of India Society's Home, 1921).

[467] Ibid., 32-7.

[468] Ibid., 50-3.

birth controllers to learn about the latest techniques.[469] Karve's enlightened views on female sexuality and contraception were unusual during this era and subjected him to approbation from colonial authorities. He eventually lost his position as a university professor and was prosecuted for his "obscene" writings.[470]

Gopaljee Ahluwalia argued for sex education and the adoption of social reforms to decrease the Indian birth rate. His article, published in 1923 in *The Birth Control Review,* demonstrated the existence of early contacts between the American birth control movement and Indian supporters. Ahluwalia viewed India's problems as self-inflicted, based on "obsolete ideas and old-world prejudices" that kept India poor and hungry despite its outstanding natural and human resources.[471] He described India as "a vast garden literally choked with weeds, fine roses being few and far between."[472] Ahluwalia prescribed a eugenic prescription for these ills with the state controlling the "marriage and parenthood of the unfit" until educational programs, marriage reforms, and contraception could prevail, and state control would become unnecessary.[473]

In 1927, N.S. Phadke published *Sex Problem in India,* his prescription for remedying overpopulation and ensuring vitality for India. Margaret Sanger wrote the foreword to this work, demonstrating her early interest in India and her

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[469] Ibid., 60-75.

[470] S.P. Sen, ed., *Dictionary of National Biography,* vol. II, s.v. R.D. Karve (Calcutta: Institute of Historical Studies, 1972), 244-6.

[471] Gopaljee Ahluwalia, "The Indian Population Problem: Selective Lower Birth Rate, A Sure Remedy of Extreme Indian Poverty," *Birth Control Review* 7 (November 1923): 291.

[472] Ibid., 288.

[473] Ibid., 291.

cooperation with Indian birth control advocates.[474] Phadke argued for eugenic solutions to India's problems encompassing positive, negative, and preventative eugenic ideas.[475] He viewed contraception as a helpful method in attaining these goals, but he reserved particular scorn for the practice of child marriage. Phadke viewed child marriage as the central issue in Indian overpopulation when he wrote, "no more efficacious and sure means than child marriage could have been devised for the production of an unfit race."[476] He blamed child marriage for much of the poverty, lack of education, and illness he saw among India's poor. Phadke also sorrowed for India's future as long as "young persons are harnessed to the dead routine of earning their bread by the sweat of their brow, and being crippled under the yoke they are never inspired to any daring thought or deed."[477] His book linked these issues with the nationalist enterprise as he argued for the need for physical strength and vitality in the fight for Home Rule.[478]

By 1930, when MSK Ayyar published *Population and Birth Control in India,* the influence of Western birth control ideas was becoming widespread in Indian writing on the subject.[479] Ayyar was a physician who argued for adopting birth control methods used in Britain and the United States while acknowledging India's specific differences and challenges. He believed that these methods could be adapted to use in India after Indians were sufficiently educated in the ideas of

[474] N.S. Phadke, *Sex Problem in India* (Bombay: D.B. Taraporevala Sons and Co., 1927), i-iii.

[475] Ibid., 26.

[476] Ibid., 73.

[477] Ibid., 75.

[478] Ibid., 8.

[479] Murari S. Krishnamurthi Ayyar, *Population and Birth Control in India* (Madras: The People's Printing and Publishing House, 1930).

genetic inheritance and the use of birth control.[480] Ayyar also expressed concern about the moral implications of contraception, writing that "birth control should not be resorted to unless it be for considerations of health or economic conditions. If it be practiced with a view to shirk responsibility and to lead to a life of merely carnal pleasure, it is committing a crime towards the race and shows cowardice on the part of the individual."[481] Although Ayyar advocated for Western contraceptive ideas, he was not in favor of the concepts of individual choice and female empowerment espoused by many Western advocates, including Margaret Sanger.

While Indian birth control supporters debated overpopulation issues, their concerns also received consideration on a broader stage. Margaret Sanger cooperated with British suffragist and birth control reformer Edith How-Martyn to organize a worldwide population conference in Geneva to bring their concerns about population issues to a broader audience. They chose Geneva because it was the headquarters of the League of Nations and Sanger wanted to expose her ideas to the influential diplomats who worked there.[482] It is unclear whether this tactic was effective, but the conference was widely covered in the popular and academic press and highlighted the complicated population issues faced by different countries. Some of the invited scholars declined the invitation, fearing the negative publicity they would receive for associating their efforts with the disreputable issue of birth control.[483] Despite the usual concerns with a conference of this kind, the organizers

[480] Ibid., 92-101.

[481] Ibid., 69.

[482] Margaret Sanger, *The Autobiography of Margaret Sanger* (1938; repr., Mineola, NY: Dover Publications, 2004), 378-9.

[483] Ellen Chesler, *Woman of Valor,* 258-9.

were pleased with the outcome.[484]

Although the conference organizers were interested in overpopulation, many of the speakers focused on underpopulation in European countries in the aftermath of World War I. In the opening session, Dr. Alfred Grotjahn explained that the German birth rate had decreased to the point that Germany's overall population was static and decreasing in urban areas.[485] He assured the attendees that France's chronic concerns about German resurgence were unfounded based on Germany's lack of population growth. He argued for government spending to "make possible to every married couple by means of economic insurance of parenthood that they shall fulfill their reproductive duties."[486] Grotjahn later emerged as a foe of contraception as he debated Margaret Sanger at some of her public talks in Europe following the conference.[487]

The Geneva Conference also included presentations and discussions on overpopulation, specifically focusing on India and China.[488] These presentations explored the interaction between food supply and overpopulation. Dr. Michael East, a Harvard geneticist, claimed that because "the world has been explored from pole to pole" and "its resources have been chartered from aardvarks to zymogens," there was no further ability to expand food production. Other presenters challenged this view, but none of them predicted an increase in food production commensurate with

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[484] Ibid., 259.

[485] "Scientists Discuss Birthrate Problem," *New York Times,* September 2, 1927.

[486] Ibid.

[487] Margaret Sanger to Edith How-Martyn, St. Moritz, December 18, 1927, in *The Selected Papers of Margaret Sanger: Volume 4: 'Round the World for Birth Control, 1920-1966,* ed. Esther Katz (Chicago: University of Illinois Press, 2016), 130-3.

[488] Alison Bashford, "Nation, Empire, Globe: The Spaces of Population Debate in the Interwar Years," *Comparative Studies in Society and History* 49, no.1 (2007): 175-80.

the increase in population.[489] This emphasis on the imbalance between food production and population increase soon became a focus of imperial authorities in India and Britain.

The traditional dependence on famine and epidemics to control India's population had been disrupted by the early twentieth century. Increased agricultural productivity had decreased the risk of starvation, and public health measures had reduced death rates. Before then, British officials depended on Malthusian arithmetic that balanced high birth rates against the regular occurrence of famines and epidemics. Without these gruesome checks on population growth, any improvements in the food supply and public health led to the rapid growth of the population.[490]

This change in British thinking about Indian overpopulation can be illustrated by examining official census reports from 1921 and 1931. The 1921 report, presented by J.T. Marten of the Indian Civil Service (ICS), showed a gradual increase in population since 1871. Marten showed modest concern about the increasing population but reassured his readers that, since "every one of the last five decades has witnessed some special disaster," the imperial government could depend on natural limitations to control the excess population in India.[491] This morbid dependence on anticipated natural disasters appeared somewhat optimistic when the results of the 1931 census were analyzed a decade later.

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[489] Percy M. Roxby, "The Geneva Conference on World Population," *Geography* 14, no. 3 (Autumn, 1927): 209.

[490] David Arnold, "Official Attitudes to Population, Birth Control, and Reproductive Health in India, 1921-1946," in *Reproductive Health in India: History, Politics, Controversies,* ed. Sarah Hodges (Hyderabad: Orient Longman, 2006): 27-8.

[491] J.T. Marten, *Census of India, 1921, Part I – Report* (Calcutta: Superintendent of Government Printing, 1924), 47.

The official report on the 1931 Census of India quickly dispelled any complacency among British officials. This census demonstrated a population increase of 34 million over the preceding decade; the population had grown by more than 10%, and India was now the most populous country in the world, surpassing China for that dubious title.[492] The census commissioner, J.H. Hutton, included a new section in his report titled "Population Problem" to reflect the growing concern engendered by these numbers. In stark contrast to Marten's previous opinion, Hutton argued against a natural correction to this problem and viewed the population increase as "a cause for alarm rather than for satisfaction."[493]

Hutton regarded the census results as proof that dependence on natural forces to regulate population growth was likely to result in further massive population increases. He began to advocate for more active measures, arguing for birth control as the most promising mechanism available and challenging the idea that a limited food supply was at the root of the problem.[494] Hutton acknowledged that India already had an active birth control movement that seemed to be making limited progress.[495] He envisioned birth control not only as a tool to control population growth but also as a means to decrease infant mortality and improve women's health.[496]

Dr. J.W.D. Megaw, IMS, one of India's most respected colonial medical officials during this period, wrote extensively about the population issue. Megaw

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[492] J.H. Hutton, *Census of India, 1931, Part I – Report* (Delhi: Manager of Publications, 1933), 29.

[493] Ibid.

[494] Arnold, "Official Attitudes to Population," 25.

[495] Hutton, *Census of India,* 31-2.

[496] Arnold, "Official Attitudes to Population," 26.

argued for some form of population control to offset the improvements in public health and nutrition that led to the rapid population increase. If an effective population control program was not implemented, he feared that "the inevitable result would be the replacement of the tragedy of death from disease by the greater tragedy of death from starvation."[497] Megaw admitted that many population experts dissented from his views, reasoning that these experts believed "that the natural fertility declines automatically during prosperous times, so that there need be no fear of overpopulation." Although he acknowledged the theoretical underpinnings of the opposition arguments, Megaw claimed that practical experience in India did not support these claims.[498]

Dr. Megaw viewed education, in its broadest sense, as the essential tool in combatting overpopulation. He argued for the utility of propaganda and praised the totalitarian regimes in "Russia, Italy, and Germany" for demonstrating "the astonishing influence of propaganda." Although he championed the role of education, he argued that the educational content should be disguised in "music, witty-dialogues, and stories" to allow for the delivery of "a few scraps of useful knowledge." Megaw differed from other contemporary commentators in that he believed that Indians were more comfortable dealing with these issues than were his European colleagues. He claimed that Indians were "far less addicted to false modesty in matters of sex than Europeans" and that "educated Indians are more broad-minded than Europeans in their attitudes towards questions which many British officials are afraid to discuss." Religious and sentimental objections were

[497] J.W.D. Megaw, "Medicine and Public Health," in *Social Service in India,* ed. E.A.H. Blunt (London: His Majesty's Stationary office, 1938): 186.

[498] Ibid., 187.

seen as less critical to Megaw because he thought that steady improvement in economic standards would overcome them over time.[499] Although Megaw and other colonial officials expressed concern about India's population growth, they did little to alleviate the problem. In the absence of government action, the solution became the responsibility of privately funded birth control advocates and their Indian allies.

## "The Great Cause in India is Going Forward": Early Birth Control Research in India

The Birth Control International Information Centre (BCIIC) was formed in London in 1930 to provide a central organization for international birth control advocacy. Margaret Sanger and Edith How-Martyn jointly led the BCIIC as a cooperative effort between the British and American birth control movements. The organization convened an advisory council of medical experts and placed representatives in various countries in North America, Europe, and Asia. It also organized and publicized a series of speaking tours by Edith How-Martyn and Margaret Sanger between 1932 and 1936. As part of this program, How-Martyn toured India in 1934 and returned with Sanger the following year.[500]

In 1933, the BCIIC convened the "Birth Control in Asia" conference in London. This conference concentrated on economic and political problems engendered by population pressures in India, China, and Japan. Despite an impressive list of participants, the meeting broke little new ground as most of the speakers focused on Malthusian predictions of impending tragedy in Asia, and no

[499] Ibid., 188-9.

[500] Lord Horder, "Population Problems in the East," in *Birth Control in Asia: A Report of a Conference held at the London School of Hygiene and Tropical Medicine,* ed. Michael Fielding (London: Birth Control International Information Centre, 1935), 11.

new birth control methods were described.[501] Although the scientific results of the meeting were disappointing, the conference marked a milestone in cooperation among international birth control advocates, and the relationships they developed there informed the next phase of Western birth control work in India. After the conference, the BCIIC sent representatives to Indian social reform groups to "put the case for birth control to the delegates."[502] Sanger and How-Martyn, encouraged by the conference, planned trips to India to survey the situation there and to spread the "gospel of birth control."[503]

Before Sanger and How-Martyn traveled to India, another British birth control advocate, Marie Stopes, began corresponding with Indian women and describing her ideas about birth control. Stopes, a British paleobotanist, developed an interest in eugenics and birth control and devoted much of her life to writing and lecturing on these topics.[504] She developed a philosophy of birth control that had two distinct aims – when dealing with educated, upper-class women, she advocated for sexual pleasure for women; when dealing with poor, uneducated women, she emphasized sexual restraint and a decrease in childbearing.[505] Her ideology was deeply rooted in eugenics and focused on the links between poverty and overpopulation.[506] She developed an interest in India in the 1920s and produced a

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[501] "Birth Control in Asia," *The British Medical Journal* 2, no.3804 (December 2, 1933): 1038.

[502] Michael Fielding, "Preface," in *Birth Control in Asia: A Report of a Conference held at the London School of Hygiene and Tropical Medicine,* ed. Michael Fielding (London: Birth Control International Information Centre, 1935), 8-9.

[503] Horder, "Population Problems," 11.

[504] Ruth Hall, *Marie Stopes: A Biography* (London: Andre Deutsch Limited, 1977).

[505] Indira Chowdhury, "Instructions for the Unconverted: Marie Stopes, Indian Women and the Making of a Pamphlet, 1920-1955," *From the Margins* (February 2002): 216.

[506] Ibid., 217.

pamphlet of contraceptive advice for distribution in the country in 1926.

The pamphlet promoted simple contraceptive methods, including Stopes' preferred method; cotton wool soaked in oil and used as a cervical barrier. She promoted this technique for three decades, although there is no evidence that it was efficacious. The cotton wool method appealed to Stopes because she imagined that most poor women in India spun their own thread and would have easy access to the necessary materials. She never visited India and showed no interest in doing so, choosing to obtain her knowledge from correspondence with local missionary workers. This lack of understanding of India and its people confounded her efforts, although Stopes worked diligently to have her pamphlet translated into vernacular languages and distributed to Indian women. This distribution never materialized because she never understood Indian culture and customs and did not cultivate a sufficient network of local workers to achieve her goal.[507] Stopes' unsuccessful early efforts at birth control work presaged many of the difficulties other Western birth control advocates faced in India. Lacking personal knowledge of India, she was continuously frustrated by her inability to convince local missionaries to adopt her ideas; this frustration was compounded by the animosity Stopes felt toward How-Martyn and Sanger and the publicity they garnered during their trips to India.[508]

Edith How-Martyn first journeyed to India in 1934 to assess the situation and mobilize a network of correspondents to carry out birth control studies. She traveled widely throughout the country and gave lectures in Bombay, Mysore,

[507] Chowdhury, "Instructions for the Unconverted," 241-2.

[508] Ibid., 215.

Bangalore, and Poona. How-Martyn reported a warm welcome from her Indian audiences and gave an optimistic account of their interest in the message she delivered.[509] Although lectures and conferences took up most of her time in India, her meeting with Mahatma Gandhi was the most important event of her trip. Gandhi was the most famous Indian of the period, and he held beliefs about birth control that were diametrically opposed to those espoused by How-Martyn and her colleagues.[510]

By the time of How-Martyn's visit, Gandhi was internationally famous as an advocate for Indian independence and traditional Hindu values. He wrote extensively about marriage and family issues, including contraception. Gandhi viewed artificial means of contraception as anathema to Indian morals, arguing that self-control or *brahmacharya* was the only acceptable method of family planning. His personal concept of *brahmacharya* recommended an extreme view of marital sexuality, allowing for intercourse only for the purpose of reproduction. Gandhi's philosophy made no allowance for sexual pleasure in marriage because "the union is meant not for pleasure but for bringing forth progeny. And union is a crime when the desire for progeny is absent."[511]

Gandhi took a strongly masculinist view of sexuality in that he perceived men as the aggressors in all sexual encounters because women were not "prey to the sexual desire to the same extent as man."[512] Since women, in his view, were not prone to sexual urges, he argued that contraception allowed men to degrade women

[509] "Mrs. How-Martyn's Great India Tour," *The New Generation* XIV, no. 4 (April 1935): 41-2.

[510] M.K. Gandhi, *Self-Restraint v. Self-Indulgence* (Ahmedabad: Navajivan Publishing House, 1928).

[511] Ibid., 42.

[512] Ibid., 171.

to satisfy their lusts while avoiding the natural consequences of their indulgence.[513] Contraceptive use, in Gandhi's argument, allowed men to be sexually promiscuous and turned married women into something akin to prostitutes in that the "difference between a prostitute and a woman using contraception is…that the former sells her body to several men, the latter sells it to one man."[514] The basic precepts of Gandhi's philosophy made any concordance between his ideas and those of Western reformers unlikely.

Gandhi also disputed the prevalent idea that overpopulation was the fundamental problem faced by his nation. He claimed that India could support twice as many people if only a "proper land system, better agriculture, and a supplementary industry" were developed by reforming the current system.[515] He argued that there was no need for artificial contraception if Indians would follow the tenets of *brahmacharya* and establish a just system for land distribution and industrial and agricultural improvement. In this argument, Gandhi seemed to be reiterating his fundamental belief that India was capable of self-sufficiency without recourse to either British colonial rule or Western ideas about birth control and overpopulation.

How-Martyn met with Gandhi twice in 1934. At his ashram outside Delhi, their first brief meeting was followed by a more extended visit at his permanent home in Wardha. Both visits were congenial, and How-Martyn perceived Gandhi as willing to listen and learn from her ideas. She presented her thoughts on the importance of birth control in freeing women from frequent childbirths and

[513] Ibid., 43-4.

[514] Ibid., 188.

[515] Ibid., 47-8.

consequent poverty. He held to his view that *brahmacharya* was the only viable path for Indian men and women. How-Martyn came away from the meeting impressed by Gandhi's hospitality and openness, but she held no illusions that she had changed his mind on this topic. She described their second meeting as "a talk of three quarters of an hour" in which "neither of us came within hailing distance of converting the other."[516]

Margaret Sanger initially interacted with the Indian birth control movement through correspondence with Phadke, Karve, and Pillay in the early 1920s. She also worked with Agnes Smedley, a radical activist working in India. Smedley had developed an interest in birth control, and Sanger enlisted her help in understanding India as Smedley had extensive ties to the Indian independence movement in the United States and Europe. She corresponded with Sanger for many years and advised her on the appropriate approach to the birth control issue in India. Smedley argued that "it is better not to stress the woman freedom viewpoint until you have a foothold" in India because she felt that Indian sensibilities would be offended by a focus on women's rights and their role in reproductive decision making.[517] Smedley eventually lost interest in Indian issues and moved to China to continue her birth control advocacy there.

Margaret Sanger made her first trip to India in 1935 at the urging of Edith How- Martyn and the BCIIC. Sanger had declined previous invitations to visit the country using her poor health and India's extreme climate as reasons to avoid the trip. She remained reluctant because Katherine Mayo's book had left her "with such

[516] Edith How-Martyn, "Mahatma Gandhi and Birth Control," undated, Wellcome Collection

[517] Agnes Smedley to Margaret Sanger, June 1924, Margaret Sanger papers, Library of Congress, Washington, DC, Microfilm, Box 14, Reel 10.

an aching pain I felt powerless to help lift the inertia she described."[518] She overcame her misgivings about the trip after being invited to speak at the All-India Women's Conference and meet with Mahatma Gandhi.[519]

Sanger arrived in India in early December 1935. Her reports from her visit reflected the warm welcome and favored treatment she received at each of her stops. Of her visit with Maharaj Sayaji Rao of Baroda, Sanger remarked that the extravagant trappings accorded to her visit "makes you feel very important."[520] In a letter to her husband, she wrote, "about 16 or 18 human beings tag along with your wife from train to station and to hotels. It's amusing."[521] She described India in exotic terms, writing that "It's dazzling colors everywhere. Then the people are so gentle and kind and happy and leisurely. It's just restful to watch them."[522] Although she described Indians in favorable terms, she was less favorably impressed with the lack of cleanliness and hygienic practices she observed.[523] Sanger's impressions of India are consistent with those of other western birth control advocates when visiting India. They often viewed India as a backward and unsophisticated culture in need of civilizing and improvement from their efforts. This outlook invariably distanced them from the Indian people that they were ostensibly trying to serve.

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[518] Margaret Sanger, *Margaret Sanger: An Autobiography* (New York: WW Norton & Company, 1938), 461.

[519] Ibid., 461, 467.

[520] Margaret Sanger to Noah Slee, December 23, 1935, Margaret Sanger Papers Project, New York University, New York, microfilm Reel 10.

[521] Margaret Sanger to Noah Slee, December 9, 1935, in *The Selected Papers of Margaret Sanger: Volume 4: 'Round the World for Birth Control, 1920-1966,* ed. Esther Katz (Chicago: University of Illinois Press, 2016), 309-312.

[522] Margaret Sanger to Noah Slee, January 12, 1936, Margaret Sanger Papers Project, New York University, New York, microfilm Reel 10.

[523] Ibid.

Sanger traveled throughout India, giving lectures, and meeting local birth control advocates. As with How-Martyn, the most publicized event of her trip was her meeting with Gandhi and their discussions about the role of birth control in India. Sanger had never met Gandhi before this trip, but they had engaged in correspondence and some public sparring in Indian newspapers and journals. In a 1925 letter to Sanger, Gandhi clarified his position on the problem of overpopulation in the context of his teachings on birth control. Gandhi wrote, "Multiplication of hordes does not terrify me so much as misconception as to the function of the union of the sexes." He did admit that he was not an expert on the "literature on the subject" and allowed for further dialogue about the issue.[524]

Shortly thereafter, Sanger published a stinging rebuke to Gandhi in a Calcutta monthly magazine. She described Gandhi's concept of *brahmacharya* as "austere unrelenting asceticism" and pointed out that abstinence was "artificial" and "contrary to the laws of human nature."[525] Sanger also quoted R.D. Karve in her article to rebut Gandhi's argument. Sanger wrote, "Thousands of years people have been preaching the Mahatma's remedy: Self Control. Only, it is impracticable for ordinary human beings such as found outside the Mahatma's utopia." After depicting Gandhi as an ascetic charlatan, out of touch with modern thought and sensibilities, Sanger advocated for sexual expression as "one of the most profoundly spiritual of all the avenues of human experience" and birth control as "the supreme moral instrument by which…each individual is enabled to progress on the road to

[524] Mohandas K. Gandhi to Margaret Sanger in *The Selected Papers of Margaret Sanger: Volume 4: 'Round the World for Birth Control, 1920-1966,* ed. Esther Katz (Chicago: University of Illinois Press, 2016), 83-4.

[525] Margaret Sanger, "Mahatma Gandhi and Birth Control in India," *Welfare* 3 (September 1925): 573-4.

self-development and self-realization."[526] Although Gandhi bore the brunt of Sanger's direct attacks on his philosophy, he remained affable and invited her to visit him to continue their discussion in person.[527]

Sanger met Gandhi at his ashram in Wardha in December 1935. An article, published in *Asia* magazine in 1936, provided the public with a transcript of some of the discussions and Sanger's recollections of her visit. Despite their disagreements on birth control and women's rights, she was treated with great hospitality and seemed to develop a genuine affection for the Mahatma.[528] The substance of the discussion followed previous statements made by each party, with neither Gandhi nor Sanger altering their fundamental views. Gandhi presented a eugenic argument demonstrating his concern that the Indian middle class would adopt birth control before the poor had access to it. He claimed that making birth control available to middle-class Indians would lead to sexual indulgence and a breakdown in the family unit. In an argument that seems to run contrary to available data, Gandhi asserted that birth control was not helpful for India's lower classes because their fertility was already suppressed by malnutrition and poor health.[529]

Sanger, as expected, disagreed with these assertions and crafted her argument around her belief in a woman's right to experience sexual pleasure without the fear of pregnancy. She argued that women, given the freedom to control their own fertility, became more "self-reliant and self-supporting" and less likely to

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[526] Ibid.

[527] Margaret Sanger to Mohandas K. Gandhi in *The Selected Papers of Margaret Sanger: Volume 4: 'Round the World for Birth Control, 1920-1966,* ed. Esther Katz (Chicago: University of Illinois Press, 2016), 289.

[528] Margaret Sanger, "Gandhi and Mrs. Sanger Debate Birth Control," *Asia* 26, no. 11 (November 1936): 698-702.

[529] Ibid.

present as a burden to welfare systems. The published transcript of the meeting showed no perceptible change in Gandhi's position, but Sanger felt that she had made some progress in swaying him. In a letter to How-Martyn, written the day after the meeting, she claimed to have "had the best of the argument." She attributed Gandhi's views to the "psychological shock and regret that was implanted deeply in his subconscious mind at the time of his father's death when he was in bed with his wife instead of at the bedside of his father."[530] In this description, Sanger appears to have ignored the orthodox Hindu philosophy that Gandhi was following, choosing to blame his opposition to birth control on a psychological trauma that he had internalized. Later, Sanger couched her disagreements with Gandhi as differences between her modern scientific outlook and his pre-modern superstitious beliefs. Sanger claimed that Gandhi saw contraception as "a sin, and I found it difficult to talk with him: I can talk anatomy and physiology but when it comes to sin I am lost."[531] This lack of knowledge of and respect for Indian culture, social customs, and religion would impede Western birth control efforts in India for many years.

After she met with Gandhi and a whirlwind tour of India, Sanger ended her trip with an address to the All-India Women's Conference (AIWC). She sought an invitation to this meeting so that Indian women would not think that "we are imposing this idea [birth control] upon them."[532] Through the efforts of Margaret Cousins, an Irish feminist living in India, an invitation was secured. Although

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[530] Margaret Sanger to Edith How-Martyn, December 4, 1935, in *The Selected Papers of Margaret Sanger: Volume 4: 'Round the World for Birth Control, 1920-1966,* ed. Esther Katz (Chicago: University of Illinois Press, 2016), 305-8.

[531] "Address by Mrs. Margaret Sanger," in *Proceedings of the International Congress on Population and World Resources in Relation to the Family* (London: H.K. Lewis and Co., 1948): 93-4.

[532] Margaret Sanger to Margaret Cousins, June 1924, Margaret Sanger papers, Library of Congress, Washington, DC, Microfilm, Box 25, Reel 17.

Sanger was asked to speak, her appearance was not without controversy. Catholic nuns in Travancore, the conference site, distributed leaflets opposing birth control and the discussion of the topic at the conference. Despite this opposition, the meeting went forward, and Sanger spoke in favor of birth control and its importance in India. A resolution supportive of birth control passed by a wide margin, and Catholic groups withdrew from the AIWC as a result. Sanger's presence at the AIWC catalyzed the issue of birth control in the Indian women's movement and introduced Sanger to Indian birth control advocates.[533]

While Margaret Sanger was making her first trip to India, Clarence Gamble also showed an interest in the country and the prospects for birth control trials there. He began a correspondence with missionaries at the Missionary Medical College for Women (MMCW) at Vellore in 1936 to make contacts among potential field workers.[534] He met with Dr. Carol Jameson while she was in the United States on sabbatical to discuss financial support of a birth control trial at her facility in India. Gamble encouraged Jameson to attempt a trial using "methods of contraception adaptable to the local situation" and offered to finance such a venture.[535] Gamble placed Jameson in contact with Gilbert Beebe, who recommended a trial of locally sourced lime juice as a contraceptive. Beebe carefully explained the necessary preparation to make the lime juice tolerable to patients but admitted that lime juice buffered to a level that decreased its irritant properties would not be an effective

[533] Ramusack, "Embattled Advocates," 49.

[534] Clarence Gamble to Dr. Carol Jameson, 4/30/36, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1262.

[535] Ibid.

spermicide.[536] He also included an article by Robert Dickinson that delineated the uses of common household products as contraceptives.[537] This focus on using cheaper, local products as contraceptives would inform Gamble and his colleagues' work in India over the next two decades. Advocacy for locally sourced contraceptives coupled with Gamble's parsimony and irascibility limited the progress of birth control research in India for Gamble and his local collaborators.

The MMCW trained female physicians and nurses for service in India. Their fundraising literature provides an insight into their views on India and its shortcomings in women's and children's health. In a booklet entitled "A Beautiful Gate in India," Dr. Ira Scudder, the college's founder, described her views on Indian women and the backwardness of their culture. In this booklet, she described the sick villagers she encountered as "ignorant, superstitious, and bigoted" and praised Katherine Mayo for her "true description" of Indian women.[538] Scudder even found cause to criticize Gandhi because he refused to provide funds to help endow a bed in the local hospital because he was not a proponent of Western medicine in India. Instead of attempting to understand the cultural and religious bases of Gandhi's objections, she chose to besmirch Hinduism, claiming that the opposition to western medicine would be appropriate to "a religion that holds to the worship of the cow."[539] Although Scudder's virulent denouncement of India and its people is a

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[536] Gilbert Beebe to Carol Jameson, 5/19/36, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1262.

[537] Robert L. Dickinson, "Household Contraceptives," *Journal of Contraception* (February 1936).

[538] "A Beautiful Gate in India," undated, page 15, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1262.

[539] Ibid., 22.

somewhat extreme example of the genre, it is not uncommon to find similar sentiments among Western birth control advocates. These attitudes compounded the prodigious difficulties they faced when introducing Indians to Western birth control ideas.

Gamble also corresponded with Victor Rambo, an American missionary physician in the Bilaspur district of Chhattisgarh, during this period. In his usual fashion, Gamble offered to provide modest funding for contraception research if Dr. Rambo would perform a field study and report the data for Gamble to analyze. He recommended foam powder for the study and provided a contact with a local manufacturer.[540] Rambo and Gamble corresponded for the next three years in an attempt to perform the study and wring some valuable data from their work. As with most studies Gamble sponsored, this study was plagued by uncertain funding and disputes over organization and personnel. When the study was initially proposed, Rambo requested $900, but Gamble offered only $300 for the first year. They eventually compromised on $450, but this appears to have been sufficient to begin the study but insufficient to continue it to its culmination. This negotiation follows a maxim of Gamble's research work; he believed that he should provide seed money to begin his studies but that the researchers themselves should seek funding from other sources to continue their work. This policy had been ineffective and counterproductive in Appalachia and Puerto Rico, and it proved disastrous in India. India was poor and had enormous needs for investment in almost every sector: therefore, funding for Gamble's studies was difficult or impossible to procure from other sources. This policy appealed to his legendary frugality, but it also doomed

[540] Sue Search to Victor Rambo, January 8, 1937, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1264.

much promising work to failure as his colleagues could not obtain the necessary monetary support to continue their work after depleting the initial funding.[541]

Funding issues aside, Rambo faced other significant obstacles in his work. After a few months, the study was moved from Bilaspur to nearby Mungeli after Rambo met with what he called "political agitation" and chose to move the study instead of attempting to continue despite the opposition.[542] It appears that the political environment was more congenial in Mungeli, but the study still faced difficulties. Duofoam, the recommended foam powder, was only intermittently available, the necessary sponges were difficult to obtain, and trained personnel were scarce. Rambo quickly realized that a central clinic was not practicable, so he instituted a home visit system employing local women to visit potential patients in their homes, mirroring the system Gamble pioneered in Berea.[543] Rambo described his reasons for adopting the visiting worker system by blaming the "ignorance and illiteracy" of the patients explaining that "general knowledge is not evident for most of the villagers." The Mungeli study provided no useful data despite the efforts of Rambo and his collaborators. However, he maintained that Duofoam was effective, blaming his lack of proof on local women and their "neglect to use [the] contraceptive."[544]

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[541] Interview with Edna Rankin McKinnon, undated, page 150, Edna Rankin McKinnon Papers, Schlesinger Library, Radcliffe Institute, Harvard University, Boston, MA, Box 4, Folder 69.

[542] Victor Rambo to Sue Search, 12/11/38, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1264.

[543] Victor Rambo to Clarence Gamble, April 4, 1940, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1264; "Report of Maternal Health Touring Center," 1938-1939, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1264.

[544] "Report of Maternal Health Touring Center," 1938-1939, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1264.

The Mungeli study was a failure. No results were ever published; its importance lies in the information Gamble obtained from Rambo and how this information influenced his views of India and birth control work there. Rambo frequently corresponded with Gamble, and his letters provided much background information and commentary on India and the problems he saw there. He described his work in India in rather grandiose terms claiming that "the **great cause** in India is going forward" despite the "many ancient superstitions and prejudices" that must be overcome.[545] Rambo argued for eugenic limitations on Indian reproduction, especially in the case of parents suffering from communicable diseases such as leprosy. Because the children of leprous parents were at increased risk of contracting the disease, Rambo argued that "if we can limit the offspring of such people (leprous parents), we will be definitely contributing towards the well-being of the homes of India."[546] Rambo also described a locally produced drug that was rumored to produce sterility for several years with no other untoward effects to the recipient. [547] Although he had only incomplete information about this drug, and he was unable to locate the family that held the secret formula for it, Rambo requested further funding from Gamble to pursue research on native contraceptives.[548] Additional funding was out of the question with the onset of World War II, but his description must have whetted Gamble's already prodigious appetite for a cheap,

[545] Victor Rambo to Clarence Gamble, June 26, 1939, "Report of Maternal Health Touring Center," 1938-1939, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1264.

[546] Ibid.

[547] Victor Rambo, "Report of First Ten Cases," August 12, 1939, "Report of Maternal Health Touring Center," 1938-1939, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1264.

[548] Victor Rambo to Clarence Gamble, April 4, 1940, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1264.

indigenous contraceptive for the Indian market.

World War II led to a near cessation of American and British birth control work in India. Both countries devoted enormous resources to the war effort, and medical personnel were needed for more pressing duties in the military. After the war, India gained its independence in 1947 and suffered through a tumultuous period of partition and civil unrest afterward. Clarence Gamble did not resume his work there until 1952, when he finally visited India and obtained firsthand knowledge of the country and its inhabitants. This visit led to a period of intense activity but little progress, as Gamble and other American advocates directly encountered India's complex society and culture for the first time.

## "Perhaps the Greatest Progress Was to be Found in India": Birth Control Research in India After World War II

While American and British birth control advocates were effectively absent from India during the war and for a few years after, the Indian birth control movement grew in influence and power. Initially led by male physicians and scientists, this movement quickly came under the control of Lady Dhanvanthi Rama Rau and her colleagues from the All-India Women's Conference (AIWC). Rama Rau was a Brahmin and the wife of Sir Benegal Rama Rau, a prominent government official who served as Ambassador to the United States, Ambassador to Japan, and Governor of the Reserve Bank of India at various times. She was a trained social worker and strove to advance women's issues in India, serving as President of the AIWC in 1947. Through her international contacts and work with the AIWC, she developed an interest in birth control and founded the Family Planning Association of India (FPAI) in 1949. She devoted her considerable energy and talent to this

cause for the remainder of her public career. In this role, Rama Rau became the public face of the birth control movement in India. She worked cooperatively with international birth control advocates when possible but maintained a firm belief that Indians should remain in control of events in their own country. This stance inevitably created conflicts with some Western birth control advocates, including Clarence Gamble.[549]

Gamble and Rama Rau first corresponded in 1950 as he reestablished contacts with Indian colleagues.[550] Their early interactions were genial as they discussed Rama Rau's difficulty in providing birth control services in rural villages ravaged by "malaria, pneumonia, and chest troubles" and Gamble's ideas for contraceptive studies that he would organize and fund.[551] Although this early correspondence depicts a cordial working relationship, Gamble persistently urged Rama Rau to use unproven methods.[552] In this early period, she showed some interest in his ideas for providing cheap, locally made contraceptives to India's rural poor, but there is no evidence that she ever brought any of these plans to fruition.[553]

Rama Rau convened the All-India Conference on Family Planning in Bombay in November 1951. Gamble chose not to attend the conference but

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[549] Dhanvanthi Rama Rau, *An Inheritance: The Memoirs of Dhanvanthi Rama Rau* (New York: Harper and Row, 1977), 253-82.

[550] Clarence Gamble to Lady Rama Rau, November 15, 1950, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1265.

[551] Lady Rama Rau to Clarence Gamble, January 1, 1951, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1265.

[552] Clarence Gamble to Lady Rama Rau, July 12, 1951, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1265.

[553] Lady Rama Rau to Clarence Gamble, August 17, 1951, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1265.

provided financial support. The keynote speaker was Dr. Abraham Stone of the World Health Organization, invited by the Indian government to speak on the "population question."[554] Stone was required to limit his remarks to the uses of the rhythm method because it was the only method approved for use in the early government birth control programs.[555] The Indian government, adopting Gandhi's philosophy, claimed that "family limitation can and should be brought about by self-control" and that artificial "contraception is sinful," limiting their efforts to promoting either abstinence or the rhythm method.[556] Rama Rau opposed the idea because she had "little faith in it" and thought it was a waste of time and money.[557] This program had no effect on India's birth rate and created controversy and opposition among birth control advocates in India and abroad.

Although Dr. Stone was not a strong advocate for the rhythm method, he supported the government program in his public proclamations. He argued that the simplicity of the method would lead Indian women to adopt it because of their "deep interest…in learning how to space children and how to limit families". Although he was troubled about the lack of proven efficacy of the rhythm method, his concerns were superseded by the method's acceptability because it did not

[554] Lady Rama Rau to Clarence Gamble, December 11, 1951, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1265.

[555] Frank W. Notestein, "Policy of the Indian Government on Family Limitation," *Population Index* 17, no. 1 (October 1951): 257-8; William F. Ogburn, "A Design for Some Experiments in the Limitation of Population Growth in India," *Economic Development and Cultural Change* 1, no. 5 (February 1953): 378-9.

[556] Notestein, 258.

[557] Lady Rama Rau to Clarence Gamble, December 11, 1951, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1265.

conflict with "social, cultural, or religious principles."[558] Despite Stone's attempts to uphold the government's approach, opposition from birth control experts and patient resistance doomed his project.

Marie Stopes reemerged as the most direct and vociferous critic of Stone and his program. In a letter to *The Eugenics Review,* Stopes referred to it as a "disaster for India" and questioned why Stone would use India "as a helpless guinea pig." She pointed out the lack of efficacy of the rhythm method and advocated again for her preferred sponge and oil method as the best contraceptive for the Indian situation. Stopes even attacked the American birth control movement claiming that "poor Indians who have been deluded by the 'safe period' and suffer the consequences may recognize that 'American instruction' is *not* the same as the pioneering birth control instruction initiated in England."[559] Margaret Sanger avoided a public attack on her friend and colleague, but she cautioned Stone privately to take care to not "appease the R C's (Roman Catholics)" at the risk of alienating Indian women.[560] This concern appears to have been informed by Sanger's experience with Catholic opposition to her work in the United States and their protests at the All India Women's Conference. Despite her warnings, there is no evidence that Catholic opposition had any role in crafting the government's birth control policy.

Field workers faced significant obstacles when they attempted to instruct

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[558] William S. Gailmor, "Human Welfare: American Doctor Brings Heartening Report From India," *New York Compass,* January 15, 1952; Jean Lyon, "Safe Days and Baby Days: India Tries Birth Control," *The Reporter,* (September 14, 1954) CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1265.

[559] Marie Stopes, letter to the editor, *The Eugenics Review* 44, no.1 (April 1952): 58.

[560] Margaret Sanger to Abraham Stone, August 30, 1951, in *The Selected Papers of Margaret Sanger: Volume 4: 'Round the World for Birth Control, 1920-1966,* ed. Esther Katz (Chicago: University of Illinois Press, 2016), 461-64.

Indian women in the rhythm method. Many women showed little interest because they or their families wanted them to have more children. Some women had difficulty learning the technique and keeping track of the days of their menstrual cycle, which made it impossible for them to employ the rhythm method effectively. Other women lacked access to a calendar, as time in many villages was reckoned around the occurrence of local events.[561] Stone distributed strings of beads to his female patients that provided a visual aid in calculating and remembering which days were safe for sexual activity. Women rejected the beads, possibly because they resembled beads used to adorn animals during village festivities. Beads and jewelry represented wealth to Indian women, and in poorer families, the family wealth was often held in the form of gold jewelry worn by the women.[562] Stone's study was doomed because it employed an ineffective method of contraception, and this method was deployed without adequate knowledge of the cultural practices of his experimental subjects.

While the Indian government program struggled with its rhythm method studies, the Family Planning Association of India (FPAI) continued to advocate for artificial contraception to alleviate India's population problem. In November 1952, the FPAI hosted the Third International Conference on Planned Parenthood in Bombay. Clarence Gamble made his first trip to India to attend this conference and quickly found himself embroiled in a dispute with one of the conference's organizers, Dr. Helena Wright. Wright, a British gynecologist, had long argued that all women deserved an examination from a trained physician. She considered a

[561] Gladys Rutherford to Clarence Gamble, July 22, 1954, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1278.

[562] Lyon, "Safe Days and Baby Days," 19-20.

properly fitted diaphragm as the only effective method of contraception. These positions placed her in direct opposition to Gamble and his colleagues, who advocated for cheap, simple methods that did not require a medical exam. She held Gamble in particular disdain, accusing him of using "simpleminded methods" and disparaging his medical credentials by referring to him as "not a real doctor" because he has "never treated a single patient for contraception."[563] Although Wright's ideas were impractical in India, her clashes with Gamble foreshadowed the interpersonal difficulties he would face as he attempted to promote his methods there.

The Bombay conference was judged a success by its sponsors, and the spirit of international cooperation it engendered led to the creation of the International Planned Parenthood Federation (IPPF). Lady Rama Rau advanced the idea of an international coordinating organization for the birth control movement at the Bombay meeting, and a constitution for the new organization was adopted at a conference in Stockholm the following year. Margaret Sanger was the first President of the IPPF, and Rama Rau was elected chairman. The IPPF divided the world into four regions: American, European, Indian / South East Asian, and Far Eastern / Western Pacific. Each region had two vice-presidents who were to oversee and coordinate birth control work in their respective areas. The new organization's structure reflected the concern that much of the previous birth control work suffered from poor coordination and planning, leading to suboptimal results. The IPPF also worked to create culturally sensitive approaches to birth control that were tailored to the situation in individual countries. It existed to remedy these issues while

[563] Williams, *Every Child a Wanted Child,* 238-9.

centralizing the administration of studies and raising funds for worldwide activities.[564]

Gamble initially attempted to cooperate with the IPPF, but he quickly chafed at the restrictions they placed upon him and his work. He planned a trip to India and Pakistan in 1954 and requested IPPF endorsement for his work. The organization approved his trip but required him to receive clearances from Family Practice Associations in each country he visited; in countries where no formal FPA existed, he was required to work in a private capacity.[565] These restrictions demonstrate the distrust between Gamble and the Indian birth control movement. Rama Rau, knowing Gamble's history of lack of cooperation, admonished him that it was "absolutely necessary for us to follow strictly the Government Committee's directions with regard to new contraceptives."[566] Gamble responded defensively, citing a litany of his titles and completed studies to deflect her criticism.[567] In the face of this opposition, Gamble, accompanied by his son Richard, journeyed to India, committed to expanding his influence there.[568]

Although the IPPF had approved Gamble as a field representative, Rama Rau ensured that the organization understood the limitations she expected him to

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[564] "Planned Parenthood: Monthly Bulletin of the Family Planning Association of India," Vol. 1, No. 3 (September 1953), CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1269.

[565] Williams, *Every Child a Wanted Child,* 242.

[566] Lady Rama Rau to Clarence Gamble, April 23, 1954, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1275.

[567] Clarence Gamble to Lady Rama Rau, April 28, 1954, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1275.

[568] Clarence Gamble to Dear Friends, June 1954, Correspondence with Clarence Gamble: 1952-1967, SA/FPA/A21/24: Box 421, Wellcome Library, London.

respect. In a letter to Vera Houghton, she made her position clear that Gamble must work only in conjunction with national family planning associations and cautioned against allowing him to fund projects on his own without IPPF approval.[569] She suggested that outside advocates, such as Gamble, could do much damage because "the political situation is delicate and a great deal of capital might be made by anti-American parties and communist groups who oppose the whole field of family planning."[570] American missionaries in India reiterated the political implications of Gamble's involvement. Carl Taylor, a missionary, explained the problem to Gamble, writing that his difficulties had "as much to do with the deteriorating relations between India and the US as it has with the fact that you have had some misfortunes and poor advice here."[571]

Rama Rau also advocated for the importance of Indians making decisions for themselves because "it is only fair to them that they should decide who to invite and when."[572] Taylor tried to mediate between the two, explaining to Gamble that Indians "appreciate generosity, but they cannot see it as such when they are not entrusted, in their own country, with the fruits of it."[573] Rama Rau had misgivings about Gamble and his methods, but she continued to treat him cordially and

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[569] Vera Houghton was a British birth control advocate, abortion activist, and eugenics promoter.

[570] Lady Rama Rau to Vera Houghton, January 13, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1284.

[571] Carl Taylor to Clarence Gamble, January 30, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1284.

[572] Lady Rama Rau to Vera Houghton, January 13, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1284.

[573] Carl Taylor to Clarence Gamble, January 30, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1284.

cooperate with him when possible.[574] Despite her cordiality, more damning accusations were soon forthcoming from other quarters.

Clarence Gamble arrived in India excited about the possibilities he imagined there. In a fundraising letter to supporters, he claimed that "perhaps the greatest progress was to be found in India," but the obstacles he faced promised only grudging progress for his plans.[575] Although Gamble made some efforts to acquaint himself with local conditions, he spent much of his trip tiger hunting in Kashmir.[576] This decadent pastime demonstrated Gamble's wealth and inability to experience India at a level where he could understand the problems faced by the masses of poor women in India's villages and cities. As usual, he distanced himself from directly encountering the problems he was addressing, choosing to associate with wealthy, educated Indians who were themselves often unaware of the harsh reality of daily life for most of their countrymen.

During the hunt, Gamble met Margaret Roots, a Canadian widow who was on a worldwide automobile tour. Gamble was impressed by Roots and enlisted her for birth control work despite her lack of experience.[577] She quickly became a focal point in the ongoing battles between Gamble and Rama Rau. Rama Rau objected to Roots for two reasons: Roots had no medical training, and she felt that the funds

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[574] Lady Rama Rau to Clarence Gamble, May 1, 1954, Carl Taylor to Clarence Gamble, January 30, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1275.

[575] Clarence Gamble to Dear Friends, June 1954, Correspondence with Clarence Gamble: 1952-1967, SA/FPA/A21/24: Box 421, Wellcome Library, London.

[576] Interview with Edna Rankin MacKinnon, undated, Edna Rankin MacKinnon Papers, Schlesinger Library, Radcliffe Institute, Harvard University, Boston, MA, Box 4, Folder 69.

[577] Ibid.

used to support her work in India could be better used in other projects.[578] Despite her prominent role in this dispute, Margaret Roots left no lasting imprint in India. Her most sympathetic chronicler, Edna Rankin MacKinnon, claimed that although she could find no vestige of Roots' work a few years later, she had probably made local contacts that would prove helpful in the future.[579] The brief tenure of Margaret Roots again demonstrates Gamble's propensity to work with Western missionaries and reformers despite the explicit wishes of the Indian birth control movement that he do otherwise.

The disagreements between Gamble and Rama Rau peaked in 1954. While Gamble besieged the IPPF offices with correspondence and requests for assistance, a groundswell of opposition developed.[580] Vera Houghton wrote to Margaret Sanger delineating the IPPF position and requesting her help in constraining Gamble. Houghton accused Gamble of multiple offenses, including deceiving local doctors about the success of his previous work, and using words like "coolie" and "native" in an offensive manner. She also claimed that he had offended Burmese government officials by graphically discussing his work at a birthday party they attended.[581] Sanger responded by admonishing Gamble in a letter she shared with Houghton. Sanger explained that his efforts were counterproductive because he was alienating Indians with his heavy-handed antics. She emphasized that Indians had "fought for

[578] Lady Rama Rau to Vera Houghton, January 13, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1284.

[579] Interview with Edna Rankin MacKinnon, undated, Edna Rankin MacKinnon Papers, Schlesinger Library, Radcliffe Institute, Harvard University, Boston, MA, Box 4, Folder 69.

[580] Reed, *The Birth Control Movement,* 299.

[581] Vera Houghton to Margaret Sanger, August 27, 1954, Reel S44, The Margaret Sanger Papers (microfilmed), Sophia Smith Collection, Smith College, Northampton, MA.

their independence" and wanted "to prove to the world that as an old civilization," they were able "to do things themselves."[582]

Gamble reacted to this criticism by explaining his philosophy of undertaking Indian birth control studies to Rama Rau. He defended his work claiming that most of his projects had been effective and that he attempted to tailor his studies to meet the needs of the local culture. He followed with an apology describing his efforts as "clumsy, Occidental, and perhaps irritating" but also defended these efforts because "there are advances…which would not have occurred if we hadn't tried to adapt our Occidental thinking to Oriental conditions."[583] Following this indifferent apology, Gamble again wrote to Rama Rau two months later. In this letter, Gamble managed to apologize in a more credible fashion blaming the mistrust between them on "unfortunate misunderstandings on my part of Indian customs and psychology."[584] Rama Rau remained cordial and cooperative with Gamble when they met in Puerto Rico in April 1955 to discuss future collaborations.[585]

Clarence Gamble moved forward with his plans for contraceptive studies in India despite the formidable obstacles he faced. During his battles with Rama Rau, he continued to plan and conduct birth control trials there, and the pace of this work accelerated after they declared an uneasy truce. He seems to have forgone

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[582] Margaret Sanger to Vera Houghton, February 8, 1955, in *The Selected Papers of Margaret Sanger: Volume 4: 'Round the World for Birth Control, 1920-1966,* ed. Esther Katz (Chicago: University of Illinois Press, 2016), 554-57.

[583] Clarence Gamble to Lady Rama Rau, February 1, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1284.

[584] Clarence gamble to Lady Rama Rau, March 19, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1284.

[585] Notes on Conference of Lady Rama Rau and CJG, May 12, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1284.

cooperation with international birth control groups and avoided working in communities that would bring his activities to the attention of his detractors. Returning to a familiar pattern, he worked with American missionary groups to perform his studies and sought to import the visiting-nurse model he had pioneered in Berea twenty years before.[586] As a concession to Rama Rau, he now saw the wisdom in hiring Indian workers to perform the home visits and contact potential patients. One of his missionary contacts, Wilma Pennell, explained that "an Indian woman will always be more successful than a foreigner" and Gamble reluctantly agreed.[587]

Although he often worked cooperatively with Christian missionaries, Gamble was conflicted about their effectiveness in birth control work. In a series of letters, these missionaries explained the problems they faced and the effect of these difficulties on performing birth control trials. Dr. Hale Cook wrote to Gamble to offer his clinic as a site for "reliable testing of birth control methods under rural conditions" but warned that "it is somewhat ticklish being a missionary today" as "there are many who may interpret an experimental study on birth control as 'Westerners experimenting on Indians'."[588] Others complained about more local problems, including competition from midwives and opposition from mothers-in-law in their villages.[589] Gamble expressed sympathy for these problems, but he also

[586] Clarence Gamble to Mr. Valeb D. Vanani, July 7, 1951, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1266.

[587] Wilma Pennell to Clarence Gamble, November 2, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1269.

[588] Dr. Hale Cook to Clarence Gamble, October 12, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283.

[589] Helen Lyall, Family Planning Project, Hayatpur, undated, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1292; Clarence Gamble to Colonel Khosla,

grumbled about the difficulties the missionary groups created for his work. He complained that "birth control is not taught in the (Christian) medical college lest it lead to promiscuity" and that "Christian schools develop a false sense of modesty that works against the method."[590] Because he had previously alienated the other birth control researchers in India, Gamble was forced to move ahead in cooperation with his missionary collaborators, despite his apparent misgivings.

From these same missionaries, Gamble absorbed tales of India's extreme poverty and excess population. They also provided him with their jaundiced opinions on the decadent nature of India's culture and religion. In correspondence with Gamble, they described Indian women in derogatory terms claiming that because they were 'forbidden to have a medical man treat them," they "were left to the mercy of the ignorant, untrained, superstitious older women utterly unfit to meet the terrible need of motherhood or childhood."[591] These views informed Gamble's ideas about India throughout his career and reinforced his pre-existing prejudices about poor women in other areas where he conducted studies.

Hampered by a lack of understanding of India and its people, Clarence Gamble, and his collaborators still funded and organized numerous birth control studies there in the decade after independence. Gamble continued to view India as

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October 31, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1308.

[590] Clarence Gamble to Dr. Mrs. Catchatoor, April 1954, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1280; Wilma Pennell to Clarence Gamble, September 21, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1269.

[591] A Beautiful Gate in India," undated, page 15, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1262.

an enormous opportunity to test his ideas. Because he remained convinced that Indian women, like Puerto Rican and Appalachian women before them, did not possess the requisite intelligence and sanitary knowledge to use available contraceptives effectively, he became obsessed with finding a cheap contraceptive that could be synthesized locally from indigenous ingredients. This obsession led him to perform studies that employed an array of unproven methods, including; a pad or sponge saturated with a concentrated salt solution, homemade rice jelly with salt, oil applied to a cotton wool pad, and testicular heating with hot water soaks to decrease sperm production. These studies are remarkable for the diversity of methods employed and their novel approaches to contraception, but none of them yielded positive results.

The concentrated salt solution method required women to insert a saturated pad into the vagina before intercourse. Gamble encouraged his workers to promote the method because "it seems to me to be the only method thus far known which has the possibility of spreading among the people of India who need it most."[592] Despite Gamble's usual optimistic assessment of the situation, the reality in India was quite different. Dr. Lois Visscher, a missionary physician, even tried to make the method more enticing by coloring the solution "with gentian violet to be impressive," but she still had limited success.[593] These enticements failed to interest local women in the study partly because "the pad was too difficult to conceal from mother-in-law

[592] Clarence Gamble to Mrs. F.D. Suknandan, February 8, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283.

[593] Lois Visscher to Clarence Gamble, August 29,1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1269.

and children."[594] Visscher expressed her discouragement in a letter to Gamble complaining that women "loathe the method" and that, in her two-year experience, "not a single woman has come back for a refill."[595] In an unusually candid summation of the studies, Gamble wrote that the "use of sponge and salt apparently increases the chance of pregnancy rather than reducing it."[596]

The rice jelly method also failed to produce positive results, but the organization and implementation of these studies further illustrates Gamble's difficulty with designing studies that were applicable to the unique needs of his Indian patients. The rice jelly was made by cooking a mixture of rice flour, salt, and water into a paste that could purportedly be used as an intravaginal spermicide. The jelly had been tested at the Margaret Sanger Research Bureau (MSRB) and Gamble's Boston laboratory.[597] The MSRB analysis showed that the jelly was not irritating to vaginal tissues, and Gamble found that the "immobilizing power of a jelly made from rice flour and salt is as great as that of the commercial jellies which are sold in this country," including the contraceptive jelly he had provided for the Berea study 20 years before.[598] Although the spermicidal properties of the jelly

[594] The Pad and Salt Method Test, March 1954, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1280.

[595] Lois Visscher to Clarence Gamble, August 19, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283.

[596] Report of Mrs. Mukandal, October 1935, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1299.

[597] For information on the Margaret Sanger research Bureau see: Jean H. Baker, *Margaret Sanger: A Life of Passion* (New York: Hill and Wang, 2011), 196.

[598] Gamble's Speech to Christian Medical Association, undated, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1293; Mrs. M. Ogden to Clarence Gamble, February 4, 1952, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1267.

seemed promising, Gamble encouraged its adoption mainly because it was cheap, and the ingredients should have been readily available throughout the country.[599]

The rice jelly method proved to be difficult to adapt to Indian conditions despite Gamble's enthusiasm. Workers quickly realized that the jelly spoiled in a couple of days in the heat of the subcontinent, and no adequate sealing jars were available for patients to store their jelly.[600] Some workers attempted to add preservatives, including benzoic acid and phenol, to the mixture to prevent spoilage, but pharmacologists associated with Gamble's laboratory questioned the safety of these substances.[601] Even the assumption that villagers would have access to the essential ingredients was challenged by field workers. India was often short on basic foodstuffs during this era, and rice was rationed in some areas. Using rationed grains for experimental purposes seemed unwise to missionary workers. The available rice was of inferior quality and contained impurities that made it difficult to use in the recommended formulation.[602] The rice jelly studies produced no positive results, but they provided some information that could have helped Gamble design future studies.

These studies failed because Gamble had no real understanding of the

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[599] Gamble's Speech to Christian Medical Association, undated, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1293.

[600] Wilma Pennell to Clarence Gamble, November 2, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1269; E.W. Whitcomb to Clarence Gamble, April 7, 1952, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1267.

[601] Clarence Gamble to E.W. Whitcomb, July 12, 1952, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1267.

[602] E.W. Whitcomb to Clarence Gamble, April 7, 1952, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1267.

environment and situation in the Indian villages he wanted to serve. He assumed that Indian women had access to finely-ground white rice flour and a double boiler to cook the mixture in. He also neglected to consider that a safe mechanism would be necessary to store or preserve the jelly. The jelly required a syringe for proper application. No syringes were available for distribution in India; some enterprising workers crafted their own syringes from glass tubing with a carved wooden plunger.[603] Many Indian women were willing to participate in birth control trials, but these unnecessary impediments eroded any goodwill the workers could engender and allowed local opposition to prevail. The efficacy of the rice jelly method is impossible to determine because it never received an adequate evaluation in the face of these preventable but ignored obstacles.

Studies using oil and a cotton pad, as previously promoted by Marie Stopes, also proved unfruitful. Sandalwood oil was known to have spermicidal properties, but it was too irritating to be used alone. Dilution with four parts of cooking oil to one part sandalwood oil made the mixture tolerable, but cooking oil was an important staple food, and it was often in short supply and quite expensive.[604] Although different modifications of Stopes' method were tried, none of them proved acceptable to Indian women or successful as contraceptives.[605]

During this period, Gamble also promoted testicular heating as an unusual

[603] E.W. Whitcomb to Clarence Gamble, April 7, 1952, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1267.

[604] Mrs. E. Vembu to Clarence Gamble, 1951 E.W. Whitcomb to Clarence Gamble, April 7, 1952, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1266.

[605]A Short Review of Family Planning Work done by Family Planning Sub-committee, UP State Branch, 1954, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1282; Clarence Gamble to Dr. Hem Sanwal, November 25, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1269.

form of male birth control to provide a cheap and straightforward answer to India's population problem. He based this idea on research showing that prolonged heating of the testicles decreased sperm counts in both animal and human test subjects.[606] He relied on the work of an unidentified "Swiss woman doctor" in Madras who encouraged men in her village to try this method during a period of famine which made pregnancy more perilous than usual.[607] Gamble described her approach as instructing "the men to spend a half-hour with their testicles in water as hot as they could bear" since he assumed that village men spent hours "in gossip in the evening the time consumed is no burden to the men involved."[608] There is no evidence that Gamble found this idea to be unconventional, even though it required the village men to sit together and gossip while they bathed their testicles in buckets of hot water. Despite his apparent lack of awareness, he chose to study another, less public method of testicular heating. He designed a trial using medical student volunteers who would be required to wear a specially designed *langot*, a traditional Indian loincloth, that would be insulated to provide increased warming to the testicles.[609] Gamble anticipated some difficulty obtaining the requisite semen samples for fertility evaluation and wrote to a missionary physician, Dr. John Wyon, for advice. Gamble worried that "perhaps the greatest difficulty would be in arranging to secure

[606]Clarence Gamble to Dr. Wyon, July 6, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1270; Clarence Gamble to Dr. Wyon, November 17, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1270.

[607] Clarence Gamble to Dr. Wyon, July 6, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1270.

[608] Ibid.

[609] Clarence Gamble to Ernie, April 8, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1274.

ejaculates, which perhaps are opposed by Indian tradition. Do you think sufficiently devoted volunteers could be found?"[610] No results from these trials were published, and it appears that the collected data was fragmented and useless for statistical analysis.[611]

Despite the countless hours of work in demanding conditions, none of the trials of indigenous materials and methods produced evidence of their contraceptive efficacy. Faced with this setback, Clarence Gamble and his cooperating investigators began to explore the use of commercially available contraceptives in their studies. The contraceptive they chose, foam tablets, had the advantages of being relatively cheap, easily obtained, and adapted for use in primitive living conditions. The tablets worked by creating a foaming, spermicidal barrier when inserted into the vagina before coitus.[612] No sponge or other vehicle needed to be inserted before intercourse or retrieved afterward, eliminating some of the objections women had against earlier methods.[613] Although the tablets had shown some promise in laboratory tests, available clinical studies failed to demonstrate their superiority over other methods.[614]

Much of the impetus for foam tablets came from Indian women who rejected

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[610] Clarence Gamble to Dr. Wyon, November 17, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1270.

[611] Clarence Gamble to Dr. Wyon, July 6, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1270.

[612] Ilana Lowy, "Defusing the Population Bomb in the 1950s: Foam Tablets in India," *Studies in the History and Philosophy of Biological and Biomedical Sciences* 43 (2012): 583.

[613] Ibid., 584.

[614] Ibid., 589-91.

other methods such as rice jelly or salt solution.[615] The idea of commercially produced medications appealed to many of them, possibly because these tablets provided an imprimatur of modernity that made them more appealing and more readily accepted. One Indian researcher even argued that " every woman should pay something as the village psychology is that if no price is paid it can't be worth having."[616] Missionary workers also encouraged the switch to foam tablets because they had become disillusioned with the homemade methods and their lack of adoption by the women they served.[617] Although there was a groundswell of opinion in favor of studying foam tablets in India, this enthusiasm ignored potentially serious problems associated with the method.

Gamble began his foam tablet studies with his usual outburst of optimism about the potential of his currently favored method. In his 1954 visit to India, he reviewed the records of a small clinic in the Nagpada district of Bombay. Workers there had previously prescribed either diaphragms or foam tablets to their female patients. The scant data they obtained demonstrated the success of each method, but "foam tablets showed slightly better results than the diaphragms" based on Gamble's understanding of the data.[618] This was an extraordinary result as diaphragms were considered the gold standard against which all other

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[615] Lois Visscher to Clarence Gamble, August 19, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283; Clarence Gamble to Dr. E.R.B. Snow, December 1, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283.

[616] Marian B. Hall to Clarence Gamble, October 22, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283.

[617] Lois Visscher to Clarence Gamble, August 19, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1306.

[618] Clarence Gamble to Mary, March 31, 1954, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1274.

contraceptives were measured. Buoyed by this meager and questionable success, Gamble moved forward with plans for foam tablet studies among his missionary contacts in India.

The foam tablet trials suffered from many of the familiar problems as Gamble's other trials. They were poorly funded, and the data collected was incomplete and often incomprehensible.[619] The trials used a variety of different brands of tablets, with an assortment of formulations and active ingredients, making any accurate comparison of results impossible. Some investigators preferred tablets made in the United States, such as Fomos and Volpar, or the irregularly available Japanese and South Korean varieties, while Gamble attempted to encourage the use of foam tablets produced in India.

Most of the foam tablets produced in India came from the Smith Stanistreet pharmaceutical company of Calcutta and were marketed under the brand name *Contab*. Gamble negotiated with RP Harvey, manager of Smith Stanistreet, to help improve the quality of their product. In exchange for a guarantee of a larger share of the Indian market, Gamble asked Harvey to standardize the formulation of *Contabs,* improve quality control during manufacturing, and to improve the tablet's shelf life.[620] Gamble also offered to help Harvey test a new formulation for the product

[619] Gladys Rutherford to Clarence Gamble, September 22, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81 Folder 1292; Clarence Gamble to William Wiser, September 26, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1292.

[620] Clarence Gamble to R.P. Harvey, March 10, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 207, Folder 3251; R.P. Harvey to Clarence Gamble, September 9, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 207, Folder 3251.

once the original tablet failed to receive marketing approval in the UK.[621] Although the new, improved tablet was never produced, the company marketed Contabs with two different formulae; one variety contained zinc sulphocarbolate, the other contained an organic chloride compound.[622]

While Gamble pushed forward with his foam tablet studies, other birth control researchers questioned their safety and efficacy. Leona Baumgartner, a noted public health activist and Commissioner of Health for New York, worked with the Indian government to promote the use of foam tablets. In this role, Baumgartner became involved in research into the toxicity of the active ingredients in some of the tablet formulations. She expressed particular concern about mercury compounds found in Volpar tablets and hydroquinone, which was present in several other brands. In early 1956, Baumgartner contacted Cornelius Rhoads, the director of the Sloan Kettering Cancer Center in New York. Rhoads had rehabilitated his reputation following his scandalous departure from Puerto Rico and was now a recognized authority on carcinogenic chemicals. Rhoads assured Baumgartner that hydroquinone was safe, but a *New York Times* article shortly thereafter questioned this opinion describing the chemical as a dangerous carcinogen.[623]

The *Times* article led to further concerns about the safety of foaming tablet ingredients. Baumgartner again queried Rhoads about the safety of this compound, and he explained that some data showed that hydroquinoline could induce cancer in

[621]Clarence Gamble to R.P. Harvey, March 10, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 207, Folder 3251.

[622] Clarence Gamble to Dr. E.W. Whitcomb, 1952, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1267.

[623] New York Times article, August 13, 1956, cited in Lowy, "Defusing the Population Bomb," 588.

rat vaginal mucosa; he did not mention hydroquinone.[624] It does not appear that the carcinogenicity of either compound was ever definitely established. Still, the concern about their safety led to their removal from contraceptive tablets and foams produced in the US and UK.[625] It is unclear whether these substances were removed from all of the foam tablets used in India.

Clarence Gamble worked diligently for three years to promote the foam tablet method among his colleagues in India. He persuaded Lady Rama Rau of its utility, and she also promoted it among the Indian birth control community.[626] Despite Rama Rau's approval, none of the foam tablet trials yielded replicable positive results. They were plagued by the usual problems with poor patient adherence, shoddy record-keeping, and variability among the different types of tablets prescribed.[627] One small study seemed to demonstrate that Contabs were effective, and the researcher claimed a 50% decrease in the birth rate among test subjects. Although the data for this study was limited and questionable, Gamble seized upon it as proof of the method's effectiveness.[628]

While these smaller, less plausible trials were ongoing, the largest and most

[624] Mary Steichen Calderone to Cornelius Rhoads, February 11, 1956, Leona Baumgartner papers, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 41, Folder 15; Cornelius Rhoads to Mary Steichen Calderone, August 11, 1956, Leona Baumgartner papers, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 41, Folder 15.

[625] Lowy, "Defusing the Population Bomb," 589.

[626] Marian Hall to Clarence Gamble, November 29, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1306.

[627] Marian Hall to Clarence Gamble, November 29, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 83, Folder 1306; Gladys Rutherford to Clarence Gamble, September 16, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1292; Clarence Gamble to Gladys Rutherford, October 3, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1292.

[628] Clarence Gamble to Dr. Sanwal, December 12, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283.

famous Indian birth control trial was also being planned. This trial, known as the Khanna Study, was conducted in the Ludhiana region of the Punjab in the village of Khanna. Dr. John Wyon initially proposed the Khanna Study. Wyon had cooperated on previous trials with Clarence Gamble and eventually came to Boston for a year of training at the Harvard School of Public Health under Gamble's sponsorship. At Harvard, Gamble introduced Wyon to John E. Gordon, a Harvard epidemiologist interested in population control from an epidemiological standpoint. Wyon and Gordon, with assistance from Gamble, planned and executed the Khanna Study.[629]

John Gordon's influence on the Khanna Study led the investigators to take an epidemiologic approach to the problem of birth control. Gordon's research centered on the relationship between public health and the difficulties an increasing population posed for economic development. The situation had been made more acute as public health advances decreased the death rates from infectious diseases leading to a widening gap between elevated birth rates and steadily reducing death rates.[630] Given this, Gordon chose to explore birth control as a means of reaching his economic development goals.

The Khanna Study began in October 1953 with an organizational period during which staff members were hired and policies formulated. By the following June, a preliminary, exploratory study began; this phase of the study offered subjects a choice among five different contraceptive methods, including withdrawal, rhythm, foam tablets, spermicidal jelly with pad, and salt solution with pad. Subjects chose their preferred contraceptive each month; foam tablets were selected by 75%

[629] Reed, *The Birth Control Movement,* 301.

[630] John B. Wyon and John E. Gordon, *The Khanna Study: Population Problems in the Rural Punjab* (Boston: Harvard University Press, 1971), 1.

of subjects that made a choice. Based on this pilot study, the investigators felt that foam tablets were the most acceptable method among their test population and chose them for the upcoming definitive trial.[631]

Following a small pilot study conducted in a single village in 1955, the definitive phase of the study commenced in 1956. In this phase, a total of 8,000 people in seven villages were given access to the study. Of the 8,000 residents in these villages, there were 1,000 couples with wives of childbearing age. Four other villages were designated as control villages; these villages received visits from a trained worker, but the workers did not offer birth control information or medications. After thirty months of work by the trained counselors, only 170 of the 1000 test couples (17%) had established themselves as contraceptive users.[632]

The Khanna Study differed from Gamble's previous work in India for several reasons. First, it was adequately funded by the Rockefeller Foundation. The Rockefeller Foundation provided more than one million dollars in support throughout the trial. Inspired by the largesse of other donors, Gamble also contributed more funding than usual, providing a salary and office space for Dr. Wyon for several years after the trial was completed so Wyon could write a monograph about his work. Second, the trial was designed by experts in statistics and clinical trial design. Their expertise provided the necessary knowledge base to develop a legitimate trial. The use of a pilot study and the inclusion of a control

[631] Population Council, "India: The India-Harvard-Ludhiana Population Study," *Studies in Family Planning* 1, no. 1 (July 1963): 5.

[632] Wyon and Gordon, *The Khanna Study,* 2.

group allowed the trial to reach valid conclusions.[633]

The Khanna Study also differed from previous studies because the investigators took particular care to accommodate the cultural differences they encountered in India. The choice of personnel created a thorny problem for Wyon, who understood the need for the village caseworkers to be both Indian and educated. There were many Indians who were qualified for the work, but Wyon worried that it would be "extremely difficult to find educated Indians of any walk of life who are willing to live in villages in India."[634] These workers also faced a caste system where their place in the village hierarchy would be determined more by their hereditary caste and less on their educational attainments.[635] Wyon also recognized the influence of the local medical practitioners in ensuring that the villagers participated in the trial. He strove to include both "allopathic and indigenous" practitioners in the study, but he understood that "here one is up against the problem of conflicting methods of medical practice." He expressed particular concern to "see that services offered by our research workers should not deprive local practitioners of their living."[636] This latter concern echoes the complaints lodged against the previous trials in Appalachia and Puerto Rico.

Notwithstanding the immense cost and hard work by the investigators, the Khanna Study was a failure. After 2 ½ years of sustained effort, 17% of couples claimed to be using contraceptives. This number reflects a steady decline in

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[633] Plan for Research into Contraceptive Methods – John B. Wyon, undated, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1270.

[634] Ibid.

[635] Ibid.

[636] Ibid.

contraceptive use from 80% of couples who expressed an interest in contraception at the outset to 30% of couples who used the method at its peak acceptability. Although the 17% number disappointed the investigators, "there was considerable evidence that actual use was not equivalent to reported use."[637] From the study data, it is apparent that some proportion of fertile women used the foam tablets and others used either withdrawal or the rhythm method, but the birth rate **increased** in the study villages during the course of the study.[638] Indeed, the birth rate in the control villages, where no contraceptives were provided, was lower than that in the experimental villages. [639]

Although the investigators reported accurately on the disheartening results of their study, they also attempted to salvage some useful insights from their work. Their final report focused on the sociological lessons learned from their research and the usefulness of these ideas for future studies. Wyon and Gordon argued that although the field trial of contraceptives at Khanna was unsuccessful, the "collateral findings brought a clearer view of the significance of population pressure."[640] In taking this stance, the investigators attempted to present their findings as a unique store of information on fertility and demography in rural India.[641] Contemporary birth control advocates such as Christopher Tietze were less kind in their assessments. Tietze summed up the Khanna Study in a short but damning statement:

[637] Population Council, "India: The India – Harvard – Ludhiana," 6.

[638] Wyon and Gordon, *The Khanna Study,* 147.

[639] Lowy, "Defusing the Population Bomb," 591.

[640] Wyon and Gordon, *The Khanna Study,* 290.

[641] Lowy, "Defusing the Population Bomb," 591.

"It (the foam tablet) made absolutely no impact."[642]

Later commentators were also critical of the Khanna Study and its investigators. In his monograph, *The Myth of Population Control,* Mahmood Mamdani presented an early critique of the Khanna Study. Mamdani claimed that the study failed because the investigators misunderstood the economic motivations of the study subjects to the extent that "birth control contradicted the vital interests of the majority of the villagers."[643] Matthew Connelly agreed with this assessment and further criticized the investigators for their choice of study villages. The researchers selected the Punjab because of its relative isolation from refugee flows in the wake of the 1947 partition. Unfortunately, the chosen area was also unique for its unbalanced male to female ratio, which began in infancy and continued into adulthood to the extent that polyandry was commonly practiced. This unusual finding was noted but never investigated except to note that the death rate for female infants was 50% higher than for male infants. Although the area had been spared from massive refugee dislocations, many landless men migrated out to seek economic opportunity, further complicating the demographic data collection.[644] James Reed provided the most unfavorable assessment of the study and its subsequent summary monograph: "In short, *The Khanna Study* was a convoluted exercise in disguising the failure of an attempt to lower birth rates with foam tablets

[642] Ibid.

[643] Mahmood Mamdani, *The Myth of Population Control: Family, Caste, and Class in an Indian Village* (New York: Monthly Review Press, 1972), 21.

[644] Matthew Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge: Belknap Press, 2008), 171; Lowy, 591.

in rural India; plenty of theory and no results."[645]

While Clarence Gamble was intimately involved with the scientifically rigorous Khanna Study, he also continued his work with implausible indigenous materials, including the common sweet pea plant. The first mention of the use of the sweet pea plant as a contraceptive can be found in the work of N.C. Nag, a Calcutta biochemist. Nag studied the nutritional value of plants, focusing for a time on *Pisum sativum linn* or the common field pea. The field pea was extensively cultivated in Bengal during the cold season, and its ripe seeds were widely used in Indian cuisine. In 1936, he published an article describing his studies. In these studies, he fed rats a porridge made from peas and found that the rats grew normally, but they failed to reproduce. Both male and female rats became sterile when they ate the prescribed diet.[646] Nag was not interested in the contraceptive properties of the plant, and his findings in that area were serendipitous. He published his results, but they were unnoticed by contraceptive researchers until they caught the interest of another Calcutta scientist, Dr. S.N. Sanyal.

Dr. Sanyal was a biochemist employed by the Calcutta Bacteriological Institute. Clarence Gamble first met him at the Planned Parenthood Conference he attended in Bombay in 1952. Dr. Sanyal presented a talk at the conference outlining his early work on a contraceptive oil he synthesized from the common field pea plant. He administered the oil as a monthly injection to fifteen fertile, married women. After one year, none of the test subjects had become pregnant, although each of them became pregnant within two years after the test was complete. Sanyal

[645] Reed, *The Birth Control Movement,* 302.

[646] N.C. Nag and A.M. Pain, "Nutrition Experiment with the Indian Foodstuff *Pisum Sativum*," *Transactions of the Bose Research Institute Calcutta* XI (1935-1936): 97.

was unsure of the mechanism of the oil's contraceptive effect, but he postulated that it interfered with the effect of progesterone on the endometrium. This presumed interference blocked implantation of a fertilized egg and therefore prevented pregnancy.[647] Clarence Gamble was intrigued with Sanyal's reported success. Based on this thin portfolio of data, Gamble offered to cooperate with Sanyal and to fund future efforts to develop his contraceptive.[648]

Dr. Sanyal had tentatively identified the active compound in his contraceptive oil as Meta-xylohydroquinone, a chemical similar to the controversial substances found in foaming contraceptive tablets. He arrived at this conclusion by testing four different chemicals he isolated from the pea plant by again feeding them to rats; meta-xylohydroquinone was the only one that decreased fertility.[649] Instead of expanding his work on the injectable oil for his subsequent study, he administered the chemical orally. Although he had minimal evidence of its effectiveness as an oral agent, he wanted to create a convenient contraceptive that would fulfill the dream of creating an oral birth control pill that was common among birth control advocates of that era. This initial trial of his oral contraceptive accrued less than twenty subjects, and the data is uninterpretable due to shoddy record-keeping and poor study design. Instead of learning from these mistakes, the study coordinators blamed patient non-compliance for the inadequate data.[650] Despite this

[647] Notes of Clarence Gamble, February 17-19, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1272.

[648] Clarence Gamble to Lady Rama Rau, April 28, 1954, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1275.

[649] S.N. Sanyal, "Sterility Effect of the Oil of *Pisum Sativum Linn* and its Relation to Vitamin E," *Calcutta Medical Journal* 47, no. 10 (October 1950): 313.

[650] S.N. Sanyal, "Temporary Sterility Effect of *Pisum Sativum (Linn)*: A Comparative Study," *The International Medical Abstracts and Reviews* 16, no. 5 (November 1, 1954): 91.

setback, Gamble and Sanyal pressed forward with plans for a more extensive study, reasoning that they could resolve the data collection issues with more personnel and an expanded panel of subjects.

Instead of focusing his efforts in the areas where Sanyal had previously worked, Clarence Gamble wanted to perform the trials through his contacts in Christian missionary medical institutions. He contacted his colleague, Dr. Carl Taylor, with a proposal that he participate in the study involving his patients in the Ludhiana district of the state of Punjab.[651] Taylor expressed interest in participating in the trial, but he also had some reservations about Sanyal's previous research. He pointed out to Gamble that Sanyal's early work had been refuted by another laboratory in Bombay where "animal experiments showed completely equivocal results" with the compound. Taylor also expressed concern that these Bombay studies intimated that the compound worked primarily as an abortifacient, raising the concern of backlash from anti-abortion activists. Although he already participated in contraceptive jelly trials, Taylor worried that this study would bring unwanted publicity to the villages he served. He explained to Gamble that he was reticent to expand his research because he did not "want people in our villages to learn too much about these studies."[652] This reticence can be explained as a simple unwillingness to take on additional duties, but his explanation to Gamble hints at the belief that Indian villagers would oppose birth control if the purpose of the medication were made clear to them by the medical personnel administering it. Eventually, Taylor declined to participate in the planned study, and Gamble looked

[651] Clarence Gamble to Carl Taylor, March 9, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283.

[652] Carl Taylor to Clarence Gamble, March 31, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283.

elsewhere for cooperating researchers.

Although the difficulty in finding qualified researchers hampered the studies, other obstacles proved to be more serious. After Dr. Sanyal isolated the compound he presumed to be responsible for the contraceptive effects, he quickly realized that he could not synthesize enough for a larger trial. As early as 1953, Sanyal was negotiating with American chemical firms to obtain the medication in bulk.[653] Gamble sent two kilograms of a chemical to India in 1955, but there was some confusion as to the exact identity of the compound.[654] The chemical supplier appears to have reclassified the substance, leaving Gamble and Sanyal unsure if the correct chemical had been supplied.[655] Gamble had a well-founded reputation for frugality, and he further confused the picture by negotiating with several different chemical suppliers to obtain the medication at the lowest price. These tactics confused the exact composition of the chemical Dr. Sanyal was administering to his experimental subjects during this period.

Two well-known chemical companies eventually provided the necessary material for the studies. Merck Chemical and Eastman Kodak each supplied the substance at different times, although representatives of each company expressed reservations about their role in the studies. Merck appears to have been the chief supplier, and their medical director, Dr. Augustus Gibson, frequently corresponded with both Gamble and Sanyal. After Merck had shipped thousands of potential

[653] Notes of Clarence Gamble, February 17-19, 1953, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 80, Folder 1272.

[654] Clarence Gamble to Doris Davidson, November 27, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1287.

[655] Clarence Gamble to Dr. Randolph Major, January 10, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1303.

doses of the medication to Dr. Sanyal, the company representatives became alarmed at the lack of available toxicity data. They resolved this issue by encouraging Gamble to obtain this information when it was convenient.[656] Merck also requested that the investigators not include any reference to the company in any publications that came from the studies because they did not wish their name to be linked to contraceptive research.[657] Chester Penning of Eastman Kodak also questioned whether Sanyal had consistently used the same chemical throughout his studies. Despite these questions, Penning was more than willing to continue his company's association with Sanyal in hopes of tapping into a potentially lucrative market for his product should the trials prove successful.[658]

Clarence Gamble expressed his concerns to Dr. Sanyal about the lack of toxicity data in March 1955. By then, women had been taking the oral formulation of Dr. Sanyal's pill for at least two years. In a letter to Sanyal, Gamble wrote, "the encouraging results which you have secured with the contraceptive capsule makes me believe that the **time has come** for a more careful survey of possible toxicity."[659] In this letter, Gamble highlighted two issues that bedeviled his contraceptive research throughout his career. First, he often overestimated any positive results he obtained while ignoring all negative results. This rather puzzling mindset allowed him to continue work on demonstrably useless therapies while neglecting other

[656] Max Tishler to Clarence Gamble, January 26, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1303.

[657] Clarence Gamble to Dr. Randolph Major, January 10, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1303.

[658] Chester Penning to Clarence Gamble, May 10, 1956, and June 8, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1303.

[659] Clarence Gamble to S.N. Sanyal, March 8, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1286.

more promising possibilities and gave him the reputation of a zealot for the therapies he embraced. Second, the delay in performing toxicity tests would offend the sensibilities of contemporary medical researchers. It is dogma today that researchers must perform toxicity testing before any widespread patient testing of new medications can be contemplated. Indeed, some of this seemingly casual attitude can be credited to the less regulated context of medical research in the 1950s, but Gamble seems remarkably cavalier even when compared with his contemporaries in the relatively small universe of contraceptive research.

Despite the multiple impediments related to personnel, poor management, and an unreliable supply of medication, Gamble and Sanyal managed to complete a small number of trials of meta-xylohydroquinone. It is difficult to review these trials in the aggregate because each trial was conducted in different ways depending on the preferences of the cooperating local investigator and the supply situation at the time of the individual trial. In a 1955 letter, Gamble optimistically described "very encouraging results" in the most recent series of completed trials. The oral medication provided a 50% reduction in the pregnancy rate when self-administered by patients. The pregnancy rate was decreased by 75% when a trained worker was tasked to observe the pill administration for each twice-monthly dose.[660] Although Gamble and Sanyal viewed these results as sufficiently positive to permit expanded studies of the compound, other commentators were less enthused.

Dr. Gibson of Merck Chemical cautioned Gamble that "the results reported thus far are by no means convincing." He based his opinion on a criticism of the study design because it had not included a control group. Gibson argued that a

[660] Clarence Gamble to Carl Taylor, March 9, 1955, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 81, Folder 1283.

control group was necessary because most of the women in the study had already been pregnant multiple times and were surely using other birth control methods. The study also excluded any women who became pregnant during the first two months of the study from the final calculations.[661] Gamble saw this as a way of eliminating women with pre-existing pregnancies, but Gibson criticized the practice because it served to screen out highly fertile individuals.[662] In a letter to Gamble, Gibson diplomatically downplayed his final criticism of the study when he wrote, "the statistics might be somewhat loaded in favor of the compound."[663]

Although the contraceptive efficacy of the pea plant extract was never convincingly demonstrated, the studies were publicized in the popular press in the United States. Both the *New York Times* and *Life Magazine* published articles about Dr. Sanyal and his work.[664] Gamble seems to have lost interest in the project by this time, but Sanyal published the final rendering of his data in an article in *Science and Culture* from June 1960. Although he allowed that with a reduction in the pregnancy rate of 50%, "individual success can neither be claimed or assured" he held out hope for the prospects of his pet project. In an optimistic conclusion to a rather unimpressive article, Sanyal wrote, "the last word is yet to come, but for the present it may be said that this oral contraceptive…may go a long way in the solution of the

[661] Dr. Augustus Gibson to Clarence Gamble, February 24, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1303.

[662] Clarence Gamble to Augustus Gibson, March 15, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1303.

[663] Dr. Augustus Gibson to Clarence Gamble, March 28, 1956, CGP, Harvard Medical Library, Francis A. Countway Library of Medicine, Boston, MA, Box 82, Folder 1303.

[664] Robert Coughlan, "World Birth Control Challenge," *Life* 47, no. 21 (November 23, 1959): 159-76; John H. Fenton, "Population Curb Seen in New Pill," *New York Times* (November 1, 1954).

population problem in India and other undeveloped countries."[665] His prediction about the importance of an oral contraceptive proved correct, but his preferred contraceptive was never marketed. In the same month that he published this article, Enovid, the original hormonal contraceptive pill, received FDA approval in the United States.

## Conclusion

American birth control advocates developed and sustained an interest in India and its reproductive practices during the middle decades of the twentieth century. Because they viewed India as overpopulated and feared the catastrophic outcome of continued population growth, they expended energy and resources in an attempt to decrease the birth rate there. Despite numerous trials of many different contraceptive methods, they made no progress toward their goal. India's population continued to increase throughout this period as the concerns about the dire effects of overpopulation increased.[666]

Using negative results from previous work in Appalachia and Puerto Rico, Clarence Gamble and others once again conducted poorly planned and inadequately executed studies that never demonstrated the effectiveness of any method of contraception. The enormity of their failure is apparent from the lack of usable data obtained from their studies, but insufficient data is not the most challenging problem they faced. In the unusual instance where a study produced interpretable data, the

[665] S.N. Sanyal, "Ten Years of Research on an Oral Contraceptive from *Pisum Sativum Linn*," *Science and Culture* 25 (June 1960).

[666] For details concerning India's rapid population growth between 1920 and 1950 see; Kingsley Davis, *The Population of India and Pakistan* (Princeton: Princeton University Press, 1951).

results remained disappointing.

Instead of evaluating their studies scientifically, these researchers interpreted negative results in a positive light, blaming any deficiencies on the perceived ignorance or indolence of their study subjects. Indian women were often viewed as backward and superstitious where matters of reproduction were concerned. Because they could place the blame on the research subjects, the researchers, with a few notable exceptions, never accepted the responsibility for their failures. As in Appalachia and Puerto Rico, they found it easier to excuse their shoddy scientific work and place the blame on the women they were ostensibly trying to help.

Although research projects in all three areas failed to yield positive results, the failures in India took place on a larger scale against a background of international cooperation and competition. Remarkably, no study there yielded positive results despite the large amount of resources and time that were committed to India. Notwithstanding these advantages in funding and researcher participation, the lack of understanding of India and its people continually thwarted the best attempts of these advocates. Even the Khanna Study, a well-organized and adequately funded project, produced uniformly negative results. While the Khanna Study suffered from some of the same cultural misunderstandings that afflicted earlier studies, these alone cannot explain its failure. The core reason that these studies failed is that none of the contraceptives studied were effective in routinely preventing pregnancy. The poor quality of the studies and the lack of cultural sensitivity by the researchers certainly contributed to the negative outcomes, but the lack of effective contraceptives rendered moot any chance of success.

The same criticism could be made concerning previous studies in

Appalachia and Puerto Rico. Still, the Indian experience stands out because of its more extensive scale and chronological proximity to the advent of the first, routinely effective chemical contraceptive, the oral contraceptive pill. Once oral contraceptives proved to be efficacious and relatively safe, the need for studies of other methods rapidly diminished. American birth control advocates, including Clarence Gamble, helped conduct the original trials of oral contraceptives, finally achieving their goal of creating an effective contraceptive that could be mass-produced and distributed to women throughout the world. Much of the research in oral contraceptives was conducted in Puerto Rico and Appalachia, bringing the American birth control movement back to its geographical roots to perform its most critical contraceptive studies.

## Chapter Five: Afterword and Conclusion

### Afterword

Although early attempts to create an oral contraceptive, such as Dr. Sanyal's, yielded uniformly negative results, the desire for this technology remained strong. Birth control advocates viewed an effective oral contraceptive as the potential culmination of their decades of work with less promising alternatives. From prior studies, it was clear that further progress was unlikely until scientists could develop a new contraceptive. This realization coincided with ongoing developments in steroid chemistry research and studies of treatments for female infertility. As researchers developed new medications to treat female infertility and menstrual disorders, they found that some of these compounds suppressed ovulation and could potentially prevent pregnancy. These findings led researchers to consider human trials of these medications to assess their contraceptive potential.[667]

Progress in this field was made more difficult because research into contraceptive technologies was controversial, and many pharmaceutical companies avoided it to circumvent the controversy.[668] Despite this reticence, advocates for birth control perceived the need for new contraceptives and searched for a mechanism to develop these promising new technologies. To energize this research, Margaret Sanger contacted philanthropist Katherine McCormick to obtain funding for the research and development of an oral

[667] For information about the development of the oral contraceptive see; Robert Jutte, *Contraception: A History* (Cambridge: Polity Press, 2003); Lara V. Marks, *Sexual Chemistry: A History of the Contraceptive Pill* (New Haven: Yale University Press, 2001); Elaine Taylor May, *America and The Pill: A History of Promise, Peril, and Liberation* (New York: Basic Books, 2010); Elizabeth Siegel Watkins, *On the Pill: A Social History of Oral Contraceptives, 1950-1970* (Baltimore: The Johns Hopkins University Press, 1998).

[668] Watkins, *On The Pill,* 24-25.

contraceptive.[669] McCormick, the heir to her late husband's fortune, had provided funding for earlier studies, but she eventually became frustrated with the lack of progress she saw. To McCormick and Sanger, an effective contraceptive needed to be safe, relatively inexpensive, and simple to use. It quickly became evident that a steroidal, oral contraceptive pill could meet all these criteria.

Sanger and McCormick approached Dr. John Rock, a respected obstetrician, and gynecologist from Harvard University. Rock had varied research interests, but he was currently studying treatments for female infertility using recently discovered steroid hormones.[670] They offered him financing from the McCormick Foundation to initiate contraceptive trials in human subjects since he was already testing similar steroid compounds on infertile women in his clinic. Rock's previous work demonstrated that women could tolerate these medications, but he found the new drugs to be limited for the treatment of infertility. Because he was a careful, methodical researcher Rock was cautious in his initial approach to using these hormones for contraception. His caution led to differences with McCormick and Sanger as they were eager to begin human trials of hormonal oral contraceptives and considered Rock's caution to be unwarranted. [671]

While Rock was engaged in his clinical work on infertile patients, his colleague Gregory Pincus was simultaneously beginning tolerability and toxicity studies with the new

[669] Katharine McCormick was the widow of Stanley McCormick, an heir to the International Harvester fortune. She was an advocate for women's rights and suffrage and contributed large sums of money to encourage research and development of an oral contraceptive. For more information about McCormick see Armond Fields, *Katharine Dexter McCormick: Pioneer for Women's Rights* (Westport, CT: Praeger Publishers, 2003).

[670] For more detailed information about Dr. John Rock see; Loretta McLaughlin, *The Pill, John Rock, and the Church: The Biography of a Revolution* (New York: Little, Brown, and Co., 1983); Margaret Marsh and Wanda Ronner, *The Fertility Doctor: John Rock and the Reproductive Revolution* (Baltimore: The Johns Hopkins University Press, 2008).

[671] Marsh and Ronner, *The Fertility Doctor,* 59.

compounds on mentally ill patients at the Worcester State Hospital.[672] Pincus was an experimental biologist who worked with Rock at the Worcester Foundation for Experimental Biology. Pincus had attained a reputation for being an insightful researcher, but he was also known for his willingness to undertake controversial research projects, including his work on in vitro fertilization and parthenogenesis in rabbits.[673] The trials at the Worcester State Hospital were not particularly controversial at the time, but they would not be permitted under current research protocols. None of the subjects provided informed consent, and many of them were incapable of doing so. The studies involved administering steroid compounds to hospitalized patients and then obtaining testicular or endometrial biopsies to assess the medication's effects. An earlier study had been planned to include Puerto Rican female medical students, but it failed to accrue enough subjects willing to undergo the onerous research protocol. Although the studies were not compliant with contemporary research standards, they showed that the new compounds were reasonably well-tolerated and did not appear to induce adverse physical changes in the subjects' tissues.[674]

### "A Cage of Ovulating Females": Oral Contraceptive Trials in Puerto Rico

Once they had established the relative safety of these new steroids, Rock and Pincus

[672] Lara Marks, "A Cage of Ovulating Females: The History of the Early Contraceptive Trials, 1950-1959," in *Molecularizing Biology and Medicine: New Practices and Alliances, 1910s-1970s,* eds. Soraya de Chadarevian and Harmka Kamminga (Amsterdam: Harwood Academic Publishers, 1998), 227. The conduct of this trial violates all current ethical and legal standards for clinical trials. The study subjects were not competent to provide consent and the trial was not designed to test whether the medication provided any benefit to the test subjects. Investigators required subjects to undergo painful and potentially dangerous endometrial and testicular biopsies. One source claims that the hospital administrator agreed to allow the trial to proceed after Katherine McCormick donated funds to have the patient wards refurbished and updated. For more information on this incident see; McLaughlin, *The Pill,* 119-120.

[673] Leon Speroff, *A Good Man, Gregory Goodwin Pincus: The Man, His Story, the Birth Control Pill* (New York: Arnica Press, 2009).

[674] Briggs, *Reproducing Empire,* 136.

pushed forward with clinical contraceptive trials spurred on by McCormick and Sanger. Although they were famously impatient and skeptical, Sanger and McCormick were finally convinced that they had found the right scientists to begin clinical trials on the oral contraceptive pill. Puerto Rico presented as a nearly ideal situation for Pincus and Rock to conduct these trials. Because it was an island, Puerto Rico met McCormick's infamous requirement that "a cage of ovulating females" would be needed to test the new medications adequately, but Puerto Rico had other advantages too. Women on the island were accustomed to using birth control and had participated in earlier studies. The island also possessed a network of public health and mission hospitals and clinics that could be employed to conduct the studies.[675]

As they had in the 1930s, American birth control advocates continued to express concern about the rapid rate of population increase and overpopulation on the island. Puerto Rico's population had continued to grow, and by the 1950s emigration to the US mainland had also increased. This emigration threatened the racial balance in American cities and created an ideal environment for research into a mechanism to limit population growth and decrease emigration.[676]

In 1954, Gregory Pincus initiated a study in Puerto Rico to test the effects of progesterone on "ovulation and related menstrual phenomena in women."[677] He conducted this study under the direction of Dr. Edris Rice-Wray of the University of Puerto Rico Medical School. Rice-Wray was an American public health physician who had been working on the island since 1950. She was already inserting IUDs and performing

[675] Gregory Pincus to Katherine McCormick, March 5, 1954, Gregory Pincus Papers (GPP), Library of Congress, Washington, DC, box 17, folder1.

[676] Briggs, *Reproducing Empire,* 166-9.

[677] Gregory Pincus to David Tyler, July 21, 1954, GPP, Library of Congress, Washington, DC, box 17, folder 1.

sterilizations through her clinic, but her primary focus was not contraception.[678] Pincus and Rock each visited Rice-Wray at different times, and although she described Pincus as "a very persuasive fellow," she seemed to be somewhat suspicious of his motives.[679] Her encounters with Rock were more genial, and she described him as "so charming and so nice." She was intrigued by the coexistence of Rock's Catholicism and birth control advocacy and queried him about his ability to remain Catholic and continue his work. Rock replied that "I think it (contraception) is none of the Church's damn business."[680] Although Rock was adamant that the Church should have no interest in contraception, the reality in Puerto Rico was often different.

Rice-Wray was somewhat unusual among female physicians in the birth control community. She viewed her birth control work as part of her public health mission instead of associating contraception with "women's rights." She did express concerns about Puerto Rico's increasing population. However, she claimed that "when I started the pill project, I wasn't thinking of population control, I was thinking of doing an interesting project."[681] She also credited her Ba'hai faith for her need to provide services to underserved populations. Rice-Wray's motivations for her birth control work point out the fallacy of viewing contraceptive promoters as a monolithic group motivated by similar concerns. Her motivations demonstrate the diversity of opinion and ideology found among these advocates.

While Pincus was researching progesterone and ovulation, he began surveying Puerto Rico as a site for future studies. During these visits, he evaluated the capabilities of

[678] Edris Rice-Wray, interview by James Reed and Ellen Chesler, 1987, Sophia Smith Collection, Smith College, Northampton, MA, p 45.

[679] Ibid., 56-7.

[680] Ibid., 61.

[681] Ibid., 59-60.

the existing birth control clinics and met with local physicians and clinic workers. He discussed his findings with Dr. Rock, and they agreed that "we should attempt in Puerto Rico certain experiments which would be very difficult in this country."[682] Pincus introduced the Puerto Rico trial in a letter to Rice-Wray in January 1956. In that letter, he proposed a meeting during his planned visit to the island to discuss the trial with her.[683] In another letter, Pincus described his proposed study as one involving a pill with a low dosage of hormones that yielded "uniformly good results" with no side effects seen among the trial participants.[684]

Pincus obtained the study medication through an agreement with G.D. Searle and Company of Chicago (Searle). They agreed to furnish sufficient quantities of a hormone preparation they labeled as substance #4642, without charge, to complete the trial. They also consented to expand the trials to other sites, including Japan, India, and Mexico, if the data from Puerto Rico warranted the expansion.[685] Although the Searle Co. agreed to provide the pills for the Puerto Rico study, it is evident that the composition of the study medications was not entirely clear to the researchers in Puerto Rico as no specific formulation for substance #4642 is to be found among the surviving trial documents.

From the outset of the trial, Rice-Wray expressed surprise at the willingness of her patients to participate and noted that "we couldn't get enough pills because as soon as we got started, everybody wanted to get on it." Since the study only provided enough

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[682] Gregory Pincus to Katherine McCormick, March 5, 1954, GPP, Library of Congress, Washington, DC, box 17, folder1.

[683] Gregory Pincus to David Tyler, July 21, 1954, GPP, Library of Congress, Washington, DC, box 17, folder 1.

[684] Gregory Pincus to Edris Rice-Wray, January 18, 1956, GPP, Library of Congress, Washington, DC, box 22, folder 2.

[685] Gregory Pincus to Katherine McCormick, December 28, 1955, GPP, Library of Congress, Washington, DC, box 17, folder 1.

medication for 100 patients, the available slots were quickly filled.[686] Rice-Wray claimed that there was no difficulty in getting the study participants to take the medication as requested. Despite the excellent compliance, she quickly realized that the side effects that patients experienced led at least one-third of them to discontinue the medication. Nausea and vomiting were the most common complaints, but enough patients remained on the drug for the first phase of the study to be completed.[687] Shortly after completing this phase of the study, Rice-Wray accepted a new position in Mexico and ended her association with the oral contraceptive trials.

Although the initial phases of the study were completed under her guidance, Rice-Wray was not entirely complimentary of the research and its creators. She constantly dealt with bothersome side effects among her patients without being informed that Dr. Pincus was altering the composition of the study medication with each new batch that he sent to Puerto Rico.[688] She later expressed concern that the pill would never be accepted because of the high incidence of side effects without realizing that the side effect issues were related to Dr. Pincus' alterations in the balance between estrogen and progesterone in the study drug.[689] Although Rice-Wray was displeased that she was not alerted to these changes, it can be argued that Dr. Pincus was attempting to perform a double-blind trial so that the incidence of side effects could be recorded in a relatively unbiased way.

After the departure of Rice-Wray, local oversight of the oral contraceptive trials was assumed by Dr. Adaline Pendleton Satterthwaite. Satterthwaite was a missionary physician

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[686] Edris Rice-Wray, interview by James Reed and Ellen Chesler, 1987, Sophia Smith Collection, Smith College, Northampton, MA, p 62.

[687] Ibid., 64.

[688] Ibid., 63.

[689] Ibid., 67

with previous experience in China. She came to Puerto Rico from China in 1952 and opened a birth control clinic at Ryder Memorial Hospital in Humacao. For a few years, she prescribed jellies, suppositories, and diaphragms and performed female sterilization procedures. She met Gamble at the IPPF meeting in San Juan in 1955 and visited him in Boston in 1956. During that trip, Gamble introduced her to Pincus, Rock, and McCormick, and they discussed the need for a subsequent trial to continue the research started by Rice-Wray.[690]

This study was performed through Dr. Satterthwaite's clinic in Humacao. The investigators compared three different formulations of Searle's Enovid to evaluate the contraceptive effectiveness and side effect profiles of these medications. Like the previous trial completed by Rice-Wray, this trial showed that the Enovid product was an effective contraceptive that was well tolerated by most of the women studied. Satterthwaite continued performing contraceptive trials, eventually enrolling more than 500 women in her studies. While she continued her work, Gamble and his collaborators searched for other locales to conduct further tests of these new medications. [691]

The Puerto Rico oral contraceptive trials provided data that Searle eventually submitted to the FDA in support of the approval application for the first oral contraceptive pill. Because the trial was performed under more rigorous guidelines and pharmaceutical company oversight, the data was more accurate than that provided by Gamble's previous studies in Puerto Rico. The close involvement of the pharmaceutical companies changed the trajectory of contraceptive research in the United States. The era of contraceptive trials that were poorly funded and incompetently managed was coming to an end. The potential

[690] Briggs, *Reproducing Empire,* 138-9.

[691] Adeline Pendleton Satterthwaite, "Effectiveness of an Oral Contraceptive," *Science* 130, no.3367, (July 10, 1959): 81-3.

profits available from effective oral contraceptives gave these companies ample motivation to perform well-designed studies that yielded accurate data.

### "A Biological Joyride to Hell": Oral Contraceptive Trials in Appalachia

For the first oral contraceptive trial on mainland women, the researchers searched for a site that would allow closer oversight of the study population. John Rock had expressed concern over the Puerto Rico trials because he feared that his full research protocol would not be implemented correctly if he could not frequently be present at the study site.[692] Rock and McCormick wanted to perform a study in the United States in a rural area where study subjects were likely to remain in the area and therefore remain accessible to the investigators for extended periods. McCormick also preferred a situation where "one can furnish enough nurses to go around to their homes and see that the women patients do accomplish the tests regularly and correctly."[693] Both of these criteria were fulfilled by Leslie County, KY, and the patients of the Frontier Nursing Service (FNS).

In 1949, a *Life* magazine article had brought Leslie County's birthrate and perceived population problems to the attention of a national audience. In this article, the magazine's medical editor, T.S. Hyland, explored the problems associated with the high birth rate in Appalachia, focusing on Leslie County. Hyland's article depicted the county as a poor rural backwater teeming with unusually fertile residents who focused on procreation at the expense of more fruitful pursuits. He claimed that Leslie County had the highest birthrate in the United States, "equal to that of the teeming hordes of China and India." The reproductive habits of the residents were described as a "disgusting perversion of

[692] Marsh and Ronner, *The Fertility Doctor,* 174.

[693] Katherine McCormick to Margaret Sanger, July 21, 1954, Margaret Sanger papers, Sophia Smith Collection, Smith College, Northampton, MA, quoted in Marks, *Sexual Chemistry,* 98.

evolution" and "a biological joyride to hell." Hyland placed the blame for these circumstances on the mountaineer's inability to make appropriate decisions and their passive, noncompetitive nature."[694]

The author also criticized Mary Breckinridge and the FNS in this sensational article. He depicted Breckinridge as opposing birth control because she did not believe her patients were capable of using contraceptives appropriately, even if they were readily available. In fact, although she did not advocate for contraception, Breckinridge argued for economic and educational opportunities as the most effective remedies for Leslie County's high birthrate. Hyland criticized the FNS for perpetuating the irresponsible breeding habits of their patients by providing excellent care that made it easier to produce multiple healthy offspring.[695] This unflattering description of the area provided an image of unrestrained reproduction that helped arouse the interest of birth control advocates.

Dr. Rock was familiar with the FNS through personal ties to the organization. After World War I, his wife, Nan Rock, served with Mary Breckinridge in a nursing relief organization in France. [696] They maintained their friendship afterward, and Mrs. Rock served on the Boston Committee for the FNS for many years.[697] Dr. Rock was a member of the FNS National Medical Council, and the couple visited Breckinridge at her home in

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[694] T.S. Hyland, "The Fruitful Mountaineers," *Life* 24 (December 1949): 60-4.

[695] Ibid., 65-67.

[696] Mary Martin to Phoebe Hawkins, interview by Anne Campbell, 79OH229FNS121, Frontier Nursing Service Oral History Project (FNSOHP), University of Kentucky Special Collections Library (UKSCL); Dr. John Rock, interview by Dale Deaton, June 15, 1979, 80OH31FNS129, FNSOHP, UKSCL.

[697] The Boston Committee for the FNS was a fundraising organization located in Boston, MA. The FNS raised funds through various city committees. The Boston committee was very active and successful in obtaining donations for the organization.

Kentucky.[698] The Rocks and Breckinridge shared class and educational ties that strengthened their relationship. Knowing the reputation of the FNS for meticulous record-keeping and the stability of the Leslie County population, Rock approached Breckinridge about utilizing her patient population as a site for the study of a new oral contraceptive.[699] Breckinridge reluctantly agreed despite her conservative views on contraception.

The pill chosen for the Leslie County trial was Enovid, produced by Searle. The company had already received FDA approval of their product for use in patients with infertility when the trial began.[700] Searle provided the medication for the study participants, and FNS nurses dispensed the pills to their patients. An experienced midwife, Anna Mae January, oversaw the study and was primarily responsible for patient evaluation and data collection.[701] The FNS maintained the original records, but the study nurses were in frequent contact with Dr. Rock in Boston and Searle in Chicago.

Criteria for participation in the Leslie County trial required that "suitable experimental subjects must be informed, intelligent, cooperative females who give evidence of normal ovulation." Researchers expected participants to possess sufficient intelligence to understand the purposes of the experiment and to be able to follow instructions precisely. Home conditions needed to be sufficiently organized to allow the participants to follow a routine and keep adequate records. No mention of a discussion of possible side effects or

[698] The FNS National Medical Council was an organization of prominent medical specialists who provided medical advice and guidance to Mary Breckinridge and the FNS. They were not involved in the daily operation of the organization but aided in developing policies and procedures.

[699] Dr. Louis Hellman, interview by Anne Campbell, November 20, 1979, 79OH273FNS124, FNSOHP, UKSCL.

[700] Enovid was a combination of norethynodrel (synthetic estrogen) and mestranol (synthetic progesterone). The majority of the FNS patients received either the 2.5mg or 5mg of norethynodrel formulations. A few patients also received the 1.25mg and 10mg formulations.

[701] Anna Mae January died in 1973 before the FNS Oral History Project began. She left no written record of her role in the trial other than patient medical records.

informed consent is found in any of the study documents.[702]

The Leslie County trial did not require that participants provide informed consent as a criterion for enrollment. Although informed consent is a strict requirement in current clinical trials, this condition did not exist at the time. The investigators provided information at their discretion, and this information was often limited to avoid frightening or prejudicing potential subjects about side effects. Despite this lack of formal consent, fellow investigators viewed Dr. Rock as an ethical investigator who provided accurate information to prospective trial participants. Dr. Luigi Mastroanni worked as a research fellow with Dr. Rock while the contraceptive studies were ongoing. He claimed that "the concept of informed consent that is so talked about now… didn't exist then. But Rock practiced it (informed consent) before it was defined. It didn't matter that Rock had no formal guidelines, he set his own, and they were high standards indeed."[703] This scrupulous attention to informed consent principles might have applied to studies directly managed by Dr. Rock, but no such guidelines applied to participants in the Leslie County trial of Enovid.[704]

One hundred and forty women participated in the trial between 1959 and 1965. There were more than 50 active participants each year during the trial period, and most of the women took either the 2.5 mg or 5mg formulation of Enovid. Fifty-two (37%) of the participants discontinued the medication and left the trial. The most common reasons for discontinuing Enovid were the patient's desire to become pregnant and the loss of patients

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[702] Worcester Foundation for Experimental Biology: Oral Contraceptive Trials, 1957-1967, John C. Rock Personal and Professional Papers, 1918-1983, Harvard Medical School c161, Francis A. Countway Library of Medicine, Boston, box 7, folder 9.

[703] McLaughlin, *The Pill,* 117.

[704] For a thorough examination of the issue of informed consent in clinical trials see, Ruth R. Faden and Tom L. Beauchamp, *A History and Theory of Informed Consent* (New York: Oxford University Press, 1986).

for follow-up when they moved away from the area. Nine patients withdrew from the trial for unknown or unspecified reasons. One patient died while taking the study medication; her death was attributed to cardiac causes, but no autopsy or post-mortem examination was performed.[705] The Leslie County trial ended in 1965 when Searle stopped providing free Enovid to the participants.[706]

The FDA had approved Enovid for the treatment of infertility and menstrual disorders in June 1957. Although this approval did not include an indication for contraception, physicians could prescribe the medication for birth control for off-label use. Although Searle was not permitted to market their drug as a contraceptive, some prominent birth control advocates encouraged its use for birth control. Katherine McCormick saw the potential benefit of this strategy when she commented that "of course this use of the oral contraceptive for menstrual disorders is leading inevitably to its use for pregnancy – and to me, this stepping stone of gradual approach to the pregnancy problem via menstrual one is a very happy and fortunate course of procedure."[707] Although it is impossible to determine what percentage of Enovid prescriptions were written for contraceptive purposes, it is apparent that Enovid quickly became a popular medication. Two years after the FDA

[705] Nursing Service – Enovid Administration, May 4, 1963, Frontier Nursing Service Collection (FNSC), 1920-2006, 2005MS47, UKSCL, box 219, folder 1; This death seemed to merit no specific attention at the time although a death attributed to cardiac causes would be quite unusual in a 30-year-old woman. Later studies demonstrated a link between thrombotic events and oral contraceptive use. For a discussion of the adverse effects of oral contraceptives see; Gordon, *The Moral Property of Women*; Marks, *Sexual Chemistry*, 138-158; Barbara Seaman, *The Doctor's Case Against the Pill* (1969; repr., Alameda, CA: Hunter House Publishers, 1995).

[706] Executive Committee meeting minutes, April 10, 1965, FNSC, UKSCL, box 8, folder 11. This mention of the end of the trial is the only documentation of the trial found in the official records of the FNS. Although the trial officially ended at this time, patient records show that patients were receiving Enovid into 1966.

[707] Quoted in Bernard Asbell, *The Pill: A Biography of the Drug that Changed the World* (New York: Random House, 1995), 159.

approved it, 500,000 American women were taking the drug.[708]

Searle applied for a contraception indication for Enovid in December 1959.[709] The application for FDA approval included data from the Puerto Rico trials, among others; Searle did not submit any data from the Leslie County trial. Because the Leslie County trial was not completed at the FDA application, its omission meant that the patient's death was never reported to the FDA. Enovid was approved as the first oral contraceptive on June 23, 1960.

## Conclusion

The availability of the oral contraceptive rapidly changed the use of birth control in the United States. Women enthusiastically adopted the new technology, and its effects on American society rapidly became apparent. For the first time, women could privately take a highly effective contraceptive without planning their sexual activity around the availability and effectiveness of other contraceptives. Once the oral contraceptive became widely available, the final legal strictures on birth control came under assault as women demanded access to the new and presumably safe medication. In 1965, in *Griswold vs. Connecticut*, the Supreme Court struck down Connecticut's statutes that prohibited the use of drugs or devices that prevented conception within the state. This ruling was followed seven years later by a judgment in *Eisenstadt vs. Baird* in which the court ruled that it was unconstitutional to restrict contraception to married women.

Since the approval of the oral contraceptive, there were concerns that the safety of

[708] Asbell 163-4.

[709] Lara Marks and Suzanne White Junod, "Women's Trials: The Approval of the First Oral Contraceptive Pill in the United States and Great Britain," *Journal of the History of Medicine and Allied Sciences* 57, no. 2 (April 2002): 133.

the medication had not been definitively established before it was approved. Reports of death from thrombotic complications in women taking the new pills began to surface in popular media and among medical professionals. These reports led to a popular backlash against oral contraceptives and resulted in warnings about their effectiveness and restrictions on their use in specific patient populations. Despite these warnings, oral contraceptive usage rose throughout the 1960s as physicians and patients became accustomed to the new medications. The advent of pills with lower amounts of estrogenic compounds also helped to decrease the risk of serious adverse events.[710]

The oral contraceptive trials represented the culmination of their careers for many of the contraceptive advocates examined here. Many of them were nearing retirement by 1960, and age and infirmity quickly took their toll; Margaret Sanger and Clarence Gamble died in 1966, followed by Gregory Pincus and Katherine Dexter McCormick in 1967. By then, contraceptive research had become the province of large, multinational pharmaceutical companies with professional research staffs and the ability to perform sophisticated data analysis.

A retrospective analysis of the trials detailed in this dissertation reveals that none of the trials conducted before the oral contraceptive studies yielded any clinically significant positive results. Clarence Gamble and his collaborators spent their professional careers performing negative studies and repeating many of their mistakes in subsequent trials with equally disappointing results. Gamble, in particular, refused to accept negative data and often reinterpreted that data in ways that allowed him to maintain the illusion that he was making steady progress toward his goal of finding a cheap, effective contraceptive. In his seminal work, *An Introduction to the Study of Experimental Medicine*, Claude Bernard

[710] For a discussion of the adverse effects of oral contraceptives see; Gordon, *The Moral Property of Women*; Marks, *Sexual Chemistry*, 138-158; Barbara Seaman, *The Doctor's Case Against the Pill* (1969; repr., Alameda, CA: Hunter House Publishers, 1995).

described a hypothetical researcher who was unable to assess the data he accumulated accurately and honestly. Bernard wrote,

> Men who have excessive faith in their theories or ideas are not only ill-prepared for making discoveries; they also make very poor observations. Of necessity, they observe with a preconceived idea, and when they devise an experiment, they can see, in its results, only a confirmation of their theory. In this way they distort observation and often neglect very important facts because they do not further their aim. …we must never make experiments to confirm our ideas, but simply to control them; which means, in other terms, that one must accept the results of experiments as they come, with all their unexpectedness and irregularity.[711]

Although they lived and worked in different centuries, it is clear that Bernard was acquainted with researchers like Gamble and the errors they committed in attempting to bolster their preconceived ideas about their research.

It is possible that Gamble and his collaborators were not unusual in their era; it would be somewhat unfair to compare them to contemporary researchers who have the benefit of much stricter research guidelines, informed consent requirements, and Institutional Review Board oversight. Despite these mitigating factors, it remains a fact that Gamble and his colleagues often misinterpreted and misrepresented the data they collected. The studies they designed were insufficient to accrue the information they required to reach accurate conclusions. These problems arose from decisions made by these investigators when they developed studies with inadequate sample sizes, no appropriate control groups, and a lack of clearly defined research questions.

While these issues of inadequate study design and faulty data collection are sufficient to explain many of the errors examined in this work, another issue magnified and compounded the errors these researchers made. Most of them, including Gamble, had little apparent interest in understanding their study subjects.

[711] Claude Bernard, *An Introduction to the Study of Experimental Medicine,* trans. Henry Copley Greene (New York: Dover Publications, 1857, original edition 1965), 133.

These subjects were uniformly female and poor except in the rare instance of a study that involved male participants. Many of them were uneducated, and most of them spoke a different language than the investigators. These characteristics created overwhelming difficulties in effectively completing research trials. Despite the ubiquity of this problem, Gamble and others rarely recognized that their lack of familiarity with their subject's cultures and societies hampered their abilities to perform successful studies. This issue seemed to continue throughout their careers despite ample opportunities and incentives to change their methods.

Although Gamble and his colleagues never developed the ties to local communities that would have made their work more productive and their results more accurate, their choices of research locales presented an opportunity to examine their work through the lens of transnational history. Ideas about birth control quickly became international, and they flowed freely between the regions described in this work.

The transmission of ideas was usually directed from the researchers to their subjects, but the reverse flow of ideas also occurred. The idea of using a nurse to visit patient homes to dispense birth control is a constant throughout this period after it was effectively modeled in Logan, WV. The Logan Study coordinators initially opposed this idea, but experience and feedback from patients and nurses led to their eventual acquiescence. Once the concept was adopted, it became the standard for all forthcoming studies. Other examples of this "reverse" flow of ideas include the use of a local nurse in Berea, KY, the understanding that a more effective contraceptive would be necessary from Puerto Rico, and the preferability of an oral contraceptive from Dr. Sanyal's work in India. Each of these examples highlights the transnational

aspects of this research and the importance of the reciprocal exchange of ideas. Unfortunately, this exchange was somewhat limited by a lack of interest from these researchers; instead of developing an understanding of their patients and their unique concerns and the opportunities, they chose to continue to view their research through their own prejudices.

Clarence Gamble and his associates spent their entire careers attempting to find a cheap and effective contraceptive. Much of this research, particularly in India, centered on finding a locally sourced contraceptive. Investigators tested several such compounds, but none of them proved effective. Most of the compounds studied, including lime juice, were intended to alter vaginal pH and render spermatozoa immobile. None of these compounds had spermicidal activity, and they were often locally irritating and had minimal appeal to women. Once chemical spermicides became more reliable, this research was permanently sidelined in favor of more effective therapies.

In an ironic twist, the FDA approved a very similar contraceptive in May 2020. Phexxi, marketed by Evofem, Inc., is a combination of citric and lactic acids and potassium bitartrate formulated as a gel. Citric acid is found in citrus fruits, lactic acid is found in yogurt and fermented dairy products, and potassium bitartrate is better known as cream of tartar, a substance used in cooking to stabilize mixtures. All the ingredients in the new contraceptive are found in commonly eaten foods, and its seeming natural derivation makes it appealing to many consumers. Phexxi works by reversing the pH-increasing effect of semen in the vaginal vault. Sperm requires a pH of 7-8 to remain viable, and Phexxi maintains vaginal pH in the normal range

(pH = 3-4), effectively immobilizing sperm and preventing conception.[712]

Phexxi is about 85% effective; therefore, it will fail in about 15 out of 100 users. It is more effective than spermicidal gels and female condoms and slightly less effective than male condoms. It is marketed for women who do not want to or cannot take oral contraceptives and women who prefer a more "natural" form of contraception. There are very few side effects, and they are related to local irritation from the gel with no known systemic complications. The price is roughly $250 for twelve doses. Although the new contraceptive gel fulfills one of Clarence Gamble's dreams of finding a natural contraceptive, it is markedly more expensive than anything he could have imagined.[713]

The approval and marketing of Phexxi demonstrates the continuation of the search for safe and effective contraceptives. Despite our better understanding of reproductive physiology, modestly effective products such as Phexxi continue to be created and marketed because the perfect contraceptive remains elusive. Phexxi is a niche contraceptive; it is intended for patients who desire a nonhormonal contraceptive that can be used sporadically. Evofem does not expect it to be widely adopted.[714]

Contraceptive drugs and devices hold a significant place in most of our lives whether we use them or not. Almost all humans engage in sexual activity at some point in their lives, and most of this sexual activity occurs in situations where procreation is possible. This universality of experience continues to propel

[712] Valeriya Safronova, "The Pill Helped Start the Sexual Revolution. What Will Phexxi Do?" *New York Times,* June 10, 2021.

[713] "Phexxi: A Nonhormonal Contraceptive Gel," *Journal of the American Medical Association* 326, no. 8 (August 24/31, 2021): 763-4.

[714] Safronova, "The Pill Helped Start the Sexual Revolution".

contraceptive research and social, cultural, and biological factors continue to make significant progress difficult to achieve. Despite the mistakes of the past, much of the current work in contraceptive research builds on previous studies, such as those performed by the contraceptive advocates examined in this work. Unfortunately, many of their mistakes continue to be replicated by today's researchers. Although their results were certainly imperfect, and their methods were often questionable, they also laid the foundation for many of the advances that have since occurred in their field.

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Curriculum Vitae

## EDUCATION

PhD Candidate in History (Defense December 2021)
University of Kentucky, Lexington, KY
Major Fields: American History, History of Medicine, British History
Minor Fields: Appalachian History, Gender and Women's History
Dissertation Title: Colonial Contraception: American Birth Control Advocates and Their Work in Appalachia, Puerto Rico, and India, 1930-1970.

2010 MA in History
Marshall University, Huntington WV
Thesis: "A Cage of Ovulating Females": Mary Breckinridge and the Politics of Contraception in Rural Appalachia
Thesis Advisors: Kevin Barksdale (chair), Kat Williams, Greta Rensenbrink

1986 Doctorate in Medicine
University of Kentucky, Lexington, KY

1982 BS in Zoology
University of Kentucky, Lexington, KY

## TEACHING EXPERIENCE

Fall 2017 – Spring 2020 – Instructor, US History and World History
Jefferson Community College, Louisville and Shelbyville, KY

Spring 2011 – Teaching Assistant, US History after 1865
University of Kentucky, Lexington, KY

Fall 2010 – Teaching Assistant, US History before 1865
University of Kentucky, Lexington, KY

## CONFERENCE PRESENTATIONS

July 2018 – "Unauthorized Experiments in New Methods: American Birth Control Advocates and the Search for an Indigenous Oral Contraceptive in India."
Society for The Social History of Medicine Conference, Liverpool, UK

June 2015 – "A Cage of Ovulating Females: Mary Breckinridge and the Politics of Contraception in Appalachia."
Southern Association for Women's History Conference, Charleston, SC

March 2013 – "Strange Bedfellows: Quakers, Socialists, and Eugenicists and the Logan County Birth Control Study."
Appalachian Studies Association Conference, Appalachian State University, Boone, NC

March 2012 – "A Cage of Ovulating Females: Mary Breckinridge and the Politics of Contraception in Appalachia."
Bluegrass Symposium, University of Kentucky, Lexington, KY

April 2009 – "The Cane Ridge Meeting: An Example of a Borderland Interaction in the Early History of Kentucky."
Rush Holt History Conference, West Virginia University, Morgantown, WV

**PROFESSIONAL ASSOCIATIONS**

American Historical Association
Organization of American Historians
Appalachian Studies Association
Society for the Social History of Medicine
American Association for the History of Medicine