Constructing Colonialism: Medicine, Technology, and the Frontier Nursing Service

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(ABSTRACT)

This thesis explores the history of the Frontier Nursing Service(FNS), a rural health care delivery system established in Hyden, Kentucky in 1925. It is particularly concerned with examining the colonial construction of the organization created by the founder, Mary Breckinridge. This construction created a conceptual framework for the technological infrastructure of the FNS, and influenced the interactions of FNS employees and the Appalachians who lived in the area served by them. A case study concerning the clinical trials of the birth control pill, Enovid, is used to highlight the influence of colonial constructions and mentalities in convincing the trial's investigators that the FNS was a suitable place for them to be conducted. And finally, this thesis critiques two theoretical models of colonialism offered by scholars in Appalachian Studies and Science and Technology Studies, and suggests new directions which might be undertaken in this area.

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INTRODUCTION

The history of the Frontier Nursing Service(FNS) marks an interesting chapter in the general history of Appalachia, as well as in the histories of medicine, science, and technology in twentieth century America. The location of the FNS at an intersection of many crucial issues in these fields makes it particularly attractive as the subject of an interdisciplinary study. Work on the post World War II history of the FNS is exciting because it affords an opportunity to discuss the birth control pill trials which took place at the FNS in the late 50s and early 60s. These trials have, until now, been untouched by those who have studied the FNS. They are interesting because they raise many questions about the colonial mentality of the investigators who looked for very specific qualities in their experimental population, and they highlight the efficacy of the colonial construction that Mary Breckinridge, the founder of the service, had created when discussing Appalachia in her fund raising speeches outside the area.

In approaching the Frontier Nursing Service as a topic of investigation, there are two key questions which must be addressed. First, why has the Frontier Nursing Service been largely ignored by scholars? And second, why is nothing

known about the clinical trials of the birth control pill Enovid which were conducted at the FNS in the late 1950s? The first question is more easily answered than the second. The answer lies in the approach of those scholars who have looked at the FNS over the years. They have been constrained by disciplinary boundaries. As of yet, there has been no extensive, scholarly treatment of the history and practices of the Frontier Nursing Service. To date, neither historians of medicine and public health, STS scholars, nor Appalachian Studies scholars have mined the rich archival resources of the FNS to produce a sustained study. In the history of medicine and public health, the history of nursing has not been held in high esteem. Rather, this history has remained marginal to the discipline, and has been viewed as largely unimportant to an understanding of the development of medical authority and power in the U.S. STS scholars have tended to explore topics central to its constituent disciplines. While historians of technology have been primarily concerned with the internal history of very specific technologies or with systems and networks.[1] Only recently have historians and sociologists of technology begun to take an interest in

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[1]John M. Staudenmaier, *Technology's Storytellers: Reweaving the Human Fabric* (Cambridge: The Society for the History of Technology and MIT Press, 1985).

medical technologies. Appalachian Studies scholars have shown more concern for the history of the FNS. They produced the FNS Oral History Collection and organized the papers in the FNS Collection. Three people working in Appalachian Studies published articles on the FNS, but a sustained study of the institution remains undone.

Instead, the FNS has been the subject of popular, hagiographical accounts and has formed an interesting chapter in the history of nursing. The secondary literature on the FNS includes two nursing dissertations, a book written by a woman hired as a public relations person for the FNS, and three scholarly articles. The dissertations take the structure of the Service as their central concern. Their purpose is to argue that the agency represents a viable alternative to the current health care delivery system in the United States.[2] A popular account written by Nancy Dammann, who was in the employ of the FNS, covers the general history of the organization from 1925 through the early 1970s. It provides much information and an insider's account of the agency.[3] The three articles discuss the

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[2] Barbara Ann Criss, "Culture and the Provision of Care: Frontier Nursing Service, 1925-1940" (Ph.D. diss., University of Utah, 1988); Helen Tirpak, "The Frontier Nursing Service-- An Adventure in the Delivery of Health Care" (Ph.D. diss., University of Pittsburgh, 1974).

[3] Nancy Dammann, *A Social History of the Frontier Nursing Service* (Sun City, AZ: Social Change Press, 1982).

founding years of the FNS from different perspectives, but none of them carries the story beyond 1940.[4]

The second question, which asks why the clinical trials of Enovid have never been discussed in literature concerning the development and testing of the birth control pill, is more difficult to answer.[5] A partial explanation can be found in the published history of the FNS. Since no account has ever emphasized the post World War II history of the organization, none of the authors cited above have discussed the trials in any sustained way. Nancy Dammann devoted two sentences to Dr. Rock and his introduction of the Pill. She wrote, "when Dr. John Rock, who helped develop the pill, visited Wendover in 1958, he offered to include FNS in an

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[4] Anne G. Campbell, "Mary Breckinridge and the American Committee for Devastated France: The Foundations of the Frontier Nursing Service," *The Register of the Kentucky Historical Society* 82(Summer 1984): 257-276; Carol Crowe-Carraco, "Mary Breckinridge and the Frontier Nursing Service," *The Register of the Kentucky Historical Society* 76(July 1978): 179-191; Nancy Schrom-Dye, "Mary Breckinridge, The Frontier Nursing Service, and the Introduction of Nurse-Midwifery in the United States," in *Women and Health in America*, ed. Judith Walzer Leavitt (Madison: Univ. of Wisconsin Press, 1984): 327-343.

[5] There is extensive discussion of the Enovid trials that took place in Puerto Rico and Haiti in several books and articles. But none of those sources mentions the FNS trials. See 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 and James Reed, *The Birth Control Movement and American Society: From Private Vice to Public Virtue* (Princeton: Princeton University Press, 1983). See the discussion of the clinical trials in Chapter two for a more complete listing of sources.

oral contraception research program. . . . Dr. Rock donated a limited number of pills and FNS found that its patients accepted the pill if it was properly explained by the nurse-midwives."[6] No other author mentioned the FNS trials. This seems strange, given that the main interviewers in the FNS Oral History Project, Dale Deaton and Carol Crowe-Carraco, asked many of the interviewees about the trials. Most of the people who were asked knew that the trials took place, but they had little information about the specific procedures employed. Even though the testing took place before the FDA approved the use of Enovid by reproductively healthy women, the FNS trials do not seem to have caused any local controversy. Dr. Rock provided the most detailed information about the clinical trials in his interview with Deaton, but even he had a vague recollection of how they were set up and who supervised them. And the only reference to the FNS in the biography of Dr. Rock was both brief and inaccurate. His biographer did not mention the role of the FNS in the trials. She noted that Nan Rock served on the Boston City Committee of the FNS for years and went on to say: "In the 1960s Rock interceded with the Searle Company to provide the frontier nurses in Appalachia and Kentucky

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[6]Dammann, *Social History*, 142.

with free supplies of the pill."[5]

Only an interdisciplinary approach such as that offered by Appalachian Studies and STS can do justice to such a rich, and largely ignored, topic. My thesis draws primarily from work done in these two areas. Many recent books and articles in Appalachian Studies have successfully combined tools from a number of disciplines to create a solid body of literature that is intent on understanding the history of the Appalachian region. These contributions allow me to place the FNS within the context of Appalachian Kentucky. Science and Technology Studies, on the other hand, has not taken up Appalachian science and technology as a topic for investigation, nor have Appalachian Studies scholars used the tools provided by STS. Neither interdisciplinary area has produced an adequate study. By combining approaches used in both areas, I hope to provide a more dynamic understanding of the history of interactions between the FNS and the people for whom they cared, to highlight the role that technology has played in shaping the health care services provided by the FNS, and to critique colonial

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[5]Loretta McLaughlin, *The Pill, John Rock, and the Church* (Boston: Little, Brown, and Company,1982), 23. This quote is misleading not only because it does not mention the trials, but also because McLaughlin confuses the reader about the location of the trials. Rock tested and distributed Enovid only within Leslie County and portions of Perry, Clay, Bell, Knott, and Harlan ounties in Appalachian Kentucky.

models offered by scholars in both areas. The approaches I will use include the deconstruction of the colonial image propagated by Breckinridge and other employees of the FNS, gender as a tool for analysis, ideas about patronage and the construction of self-image in order to enroll actors and strengthen the FNS' funding network, and the colonial models mentioned above.[5]

I will argue that the organizing principle of the FNS from its inception was Mary Breckinridge's construction of colonialism. I understand the term colonialism to encompass a nuanced and contradictory set of relationships between the founder and employees of the FNS on the one hand, and the Appalachian people served on the other. For the purposes of this thesis, the term offers a way to examine the mentalities of both the colonizers and the colonized, as well as providing the understanding needed for a discussion of Breckinridge's deliberate construction of the mountain people's culture for the purposes of strenghening her ability to raise funds for the FNS. I am less concerned with illuminating the colonial practices that outside

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[5]I have found several sources in STS to be valuable in thinking about how to approach this topic. In understanding ideas about patronage and self-image two books have been particularly helpful. See Mario Biagioli, *Galileo, Courtier: The Practice of Science in the Culture of Absolutism* (Chicago: University of Chicago Press, 1993) and Bruno Latour, *The Pasteurization of France* (Cambridge: Harvard University Press, 1988).

extractive industries engaged in for the purposes of economic exploitation.

Clearly Breckinridge thought that the mountaineers would accept modern medicine and could be educated to a station they had yet to attain, but at the same time she viewed them as different and peculiar, and while they were educable, they could not ever reach the same level of development enjoyed by those who came to the FNS from the outside. For this reason, she often treated the mountaineers, and thought of them, as though they were children. Here, as in other colonized areas, "colonialism rested on a contradiction: a desire to make the 'native adopt the habits and practices of the colonizer but not to a degree that destabilized the boundaries between colonized and colonizer."[9] She created an image of Appalachia that appealed to potential employees of the service, and successfully deployed the image to garner the private funds with which she operated her philanthropy. This colonial construction provided a conceptual framework for the technological infrastructure that she put into place. The justifications provided for the construction, and her belief that it was an accurate depiction allowed her to set up a

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[9]Pamela Scully, "Rape, Race, and Colonial Culture: The Sexual Politics of Identity in the Nineteenth-Century Cape Colony, South Africa," *American Historical Review* 100 (April 1995), 338.

system over which she had complete control.

After Breckinridge's death, Helen E. Browne and Dr. W.B. Rogers Beasley broadened her original notion of colonialism to include more direct comparison of Appalachia with the Third World. In its various incarnations colonialism remained the dominant feature of the service well into the 70s when the FNS began to look more like a community hospital than an outpost health care center working on the "frontier."

One of my goals in writing this thesis is to discuss the clinical trials with as much specificity as possible. But a full answer as to why they remain unknown still cannot be given. I hope to supply more information in a later project. For the purposes of this initial work, the clinical trials provide a focal point for discussion of colonial constructions and mentalities, as well as affording a way to explore the agency shown by the women who participated in the trials as they eagerly accepted a new form of contraception that would allow them to control their own fertility. This study can be seen as a window through which larger issues involving values, technology, science, medicine, and the ethics of human experimentation can be viewed.

I have three primary objectives to fulfill in writing this thesis. Each corresponds roughly to a chapter. The

first objective, taken up in chapter one, is to show the ways in which Breckinridge created the FNS and constructed a colonial image to support it. This discussion includes an exploration of the FNS' organizational technologies such as the courier system, the outpost nursing centers, and the use of horses which allowed the service to function on a practical level and also meshed well with the image Breckinridge created. In addition, I will discuss the transformation of the institution that resulted from the administration's decision to accept public funds and join such programs as Medicare/Medicaid. This chapter marks an initial attempt to provide more post World War II history of the FNS than has previously been available and supplies the context for a detailed discussion of the clinical trials and the FNS' move toward family planning.

My second objective is to make sense of the clinical trials of Enovid that began at the FNS in 1958. I hope to do this by situating the trials in the context of the wider history of the development and testing of the birth control pill by the Worcester Foundation for Experimental Biology and Searle Pharmaceutical Corporation. The trials will also be placed within the history of the Frontier Nursing Service as a way of understanding how they came to be conducted in Appalachian Kentucky. The location of the trials at the FNS raises an interesting discussion of how Dr. Rock, the

primary investigator of these trials for Worcester and Searle, knew of the FNS and why he thought the women served by FNS would be a useful experimental population. This chapter is also an attempt to understand the importance of the trials from the viewpoint of the staff at the Frontier Nursing Service and from the perspective of the women being offered oral contraception for the first time.

Chapter three analyzes and critiques two colonial models put forth by scholars in Appalachian Studies and in studies of Science and Empire to determine the extent to which either or both can be helpful in understanding colonialism at FNS. The models, in their initial formulation, have grown quite dated by now. Each was introduced in the late 1960s and early 1970s. But they have had a lasting impact on the scholarship of both fields and are still widely cited. In chapter three I use the history of the FNS as a case study to critique both models and offer some changes that give each model better explanatory value. And finally, I discuss the colonial mentality of the founder and staff of the Frontier Nursing Service toward Appalachia, and the people for whom they cared. I hope to show how this mentality colored their view of Appalachia, informed the health care work done at the FNS, and gave them a mission to be accomplished. The possibilities for further study of the Service seem almost limitless. This thesis is an attempt to

open up those possibilities and raise new questions, rather than provide a definitive understanding of the history of the Frontier Nursing Service.

My thesis could not have been undertaken if the rich resources of the FNS Collection had not been available. They are located at the University of Kentucky in the Special Collections department of the Margaret I. King library. The main collection houses 370 boxes of documents in the Frontier Nursing Service papers, more than 300 photographs, and an oral history project on the FNS containing over 100 interviews with FNS nurses, administrators, and physicians and with area residents. There are also four sets of boxes not listed in the index for the FNS collection. These boxes contain birth control records, a survey on IUD and pill contraception, a family planning survey, and a cancer survey. I cannot overemphasize the richness of the collection, or the extent to which it remains largely unexplored.

CHAPTER ONE
CONSTRUCTING COLONIALISM: MEDICINE, TECHNOLOGY, AND THE FRONTIER NURSING SERVICE

In 1958 the women of Leslie County began to participate in the clinical trials of Searle Pharmaceutical Company's oral contraceptive, Enovid. With the initiation of these trials, these women became the first population of Anglo-Americans to participate in the trials. Their selection as an appropriate experimental group rested on the fact that they had high fertility rates, a low socio-economic background, low levels of education and literacy, and could be easily controlled by the Medical Director and the nurse-midwives of the FNS. These women came to the attention of the scientists conducting the clinical trials because of the longstanding friendship of Breckinridge and Dr. John Rock, one of the co-developers of Enovid. I will argue that the colonial construction that Breckinridge worked so diligently to put into place enhanced the appeal of Appalachian women as an experimental group, and that the remote location of the FNS made it possible to conduct the trials without incurring the wrath of those who were morally and religiously opposed to the Pill. The trials represent a perfect case study for highlighting both the colonial mentalities of those in charge of them, and the colonial construction that had slowly been put into place throughout

the years of the FNS' existence.

Situating the Frontier Nursing Service: The Medical Context

Mary Breckinridge established the Frontier Nursing Service in 1925.[1] The service primarily focused on providing registered nurse-midwives to supervise the pregnancies, deliveries, and recoveries of Appalachian women living in Leslie County and portions of Perry, Clay, Bell, Knott, and Harlan Counties in Southeastern Kentucky. Both the form and function of the service were unusual for the time in which it was established. The general trend in medicine in the United States was toward community hospitals where increasingly powerful, predominantly male, physicians provided the majority of medical services, and nurses found themselves situated in a clearly secondary and inferior role as physicians' helpers. In contrast, the female nurse-midwife at FNS functioned as the primary health care provider for the entire population served. The physician played an important, but secondary, role as back-up in cases of emergency. And the central administrative building of

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[1]From 1925-1928 the Frontier Nursing Service was called the Kentucky Committee for Mothers and Babies. For the sake of brevity, the Frontier Nursing Service will be referred to throughout this paper as the FNS. Ann G. Campbell, "Mary Breckinridge and the American committee for devastated France: The Foundations of the Frontier Nursing Service," *The Register of the Kentucky Historical Society* 82 (Summer 1984), 271.

FNS, with its nursing centers scattered throughout the counties served, differed decidedly from the typical unified structure of the community or charity hospital.[2]

The Service's mission to use midwives to aid in birth put it at odds with both the growing medicalization of birth and the corresponding struggles of obstetricians to establish themselves as the only professionals qualified to ensure the safety of both mother and child in delivery. In fact, in the period 1900-1930, the professional medical establishment made a widely successful attempt first to limit the sphere of work of the midwife, and then to abolish her completely. For a variety of reasons, many stemming from the period predating 1900, doctors nationwide waged an attack against all forms of midwifery and made it virtually impossible for the midwife, who had no form of professionalization, to practice.[3]

The statements of obstetrician Joseph B. DeLee of Chicago illustrate the strategies employed by physicians in

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[2]See Paul Starr, *The Social Transformation of American Medicine* (New York: Basic Books, 1982) and Rosemary Stevens, *In Sickness and In Wealth: American Hospitals in the Twentieth Century* (New York: Basic Books, 1989).

[3]Frances Kobrin, "The American Midwife Controversy: A Crisis of Professionalization," in *Sickness and Health in America*, ed. Judith Walzer Leavitt and Ronald L. Numbers (Madison: Univ. of Wisconsin Press, 1985), 197-205. For an extended discussion of the attempts of obstetricians to professionalize see William Ray Arney, *Power and the Profession of Obstetrics* (Chicago: University of Chicago Press, 1982).

their efforts to claim the birth process as an area of specialty. In the first volume of the *American Journal of Obstetrics and Gynecology* he argued that "birth was a 'pathologic process' and that 'only a small minority of women escape damage during labor.'"[4] Given that the process of labor and delivery put the mother at such risk, obstetricians promised to give mothers a safe and scientific alternative to midwives. In reality, obstetric delivery in that period was no safer than that offered by midwives. Obstetrics had not yet achieved professional status as a specialty, and medical school instructors had difficulty providing their students with enough experience to insure that they understood the techniques they needed to use in childbirth. Obstetricians needed mothers to choose the hospital alternative and increase their case loads. To achieve specialization, physicians set about maligning the midwife in general, encouraging state boards of health to establish stringent qualifying exams for women attempting to practice midwifery, and creating a different technique to which the midwife could not lay claim. DeLee, for instance,

> sedated the parturient with scopolamine, allowed the cervix to dilate, gave ether during the second stage, performed an episiotomy, and lifted the fetus with

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[4]Judith Walzer Leavitt, "'Science' Enters the Birthing Room," in *Sickness and Health in America*, ed. Judith Walzer Leavitt and Ronald L. Numbers (Madison: Univ. of Wisconsin Press, 1985), 90.

> forceps. He then extracted the placenta, gave ergot to help the uterus contract, and stitched the perineal cut.
>
> DeLee's operation achieved wide acceptance. It represented the new move in the 1920s and 1930s to make obstetrics scientific, systematic, and predictable by putting it under the control of the specialist.[5]

This routine was drastically different from that employed by the midwife. Methods such as DeLee's, and the routine hospitalization of women for delivery, became commonplace during this time, especially for women living in more urban environments. Rosemary Stevens noted that hospital obstetrics began to grow rapidly in the United States. just at the time when Mary Breckinridge established the FNS. "By 1930, it was unusual for a woman in comfortable circumstances in a large city to be delivered at home, anywhere in the United States."[6] Still, it remained fairly commonplace for women in rural areas to be delivered by the increasingly suspect midwives. And, in the case of the women served by the FNS, birth was still viewed as a natural rather than a "pathological" process.

In the United States during the early twentieth century, three types of midwives existed: the granny, the lay midwife, and after 1910, the registered nurse-midwife. The granny midwife gained experience for aiding in birth

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[5]Ibid, 90.
[6]Rosemary Stevens, *In Sickness and in Wealth*, 107.

through having her own children and through helping friends and relatives with theirs. Grannies practiced mainly in the rural areas of the South and Midwest. The lay midwife also gained knowledge through experience, but had usually been through training by working with a physician, attending a European institution, or matriculating from a college of midwifery in the United States. The registered nurse-midwife, appearing around 1910, possessed a college education and worked in conjunction with either an obstetrician or a general practitioner. The only one of these three types to gain even a marginal level of professionalization, the registered nurse-midwife grudgingly gained acceptance because she worked within the existing medical power structure.[7] As already noted above, Breckinridge chose to use the registered nurse-midwife with back-up provided by a general practitioner. She also made certain that she had the support of prominent physicians in

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[7]For histories of midwifery focusing on the period under discussion see: Judy Barrett Litoff, *American Midwives: 1860 to the Present* (Westport, CT: Greenwood Press, 1978); Barbara Katz Rothman, *In Labor: Women and Power in the Birthplace* (New York: W.W. Norton and Co., 1982); Deborah A. Sullivan and Rose Weitz, *Labor Pains: Modern Midwives and Home Birth* (New Haven: Yale University Press, 1988); and Richard W. and Dorothy C. Wertz, *Lying-in: A History of Childbirth in America* (New York: Free Press, 1977). Judy Barrett Litoff, *The American Midwife Debate: A Sourcebook on its Modern Origins* (New York: Greenwood Press, 1986 provides a collection of primary sources on the debate.

Louisville and Lexington, Kentucky, as well as endorsements from reputable physicians throughout the U.S. This was a brilliant strategy for building her funding and patronage networks. Breckinridge ensured the support of the medical establishment by asking for their advice and guidance, but she retained total control over the direction and mission of the FNS while empowering the nurse-midwives who worked there. Nurse-midwives at the FNS had more autonomy to make health care decisions than they would have found in any other U.S. health care institution. And perhaps most importantly for the FNS' continuing success, Breckinridge chose an area so isolated that very few physicians found it appealing, or had any reason to feel threatened by the FNS itself.

From the outset, Breckinridge intended to show that nurse-midwives could make a significant contribution to rural health care by providing quality services in areas where physicians were scarce. In the years preceding the founding of the FNS, the number of physicians graduating from medical school had been consistently declining. In addition, even before the number of graduating physicians had gone into decline, there had been a general movement of practitioners from rural to urban areas. In 1920 biostatistician Raymond Pearl conducted a study which showed that the distribution of U.S. physicians by region was

closely correlated with per capita income. In the study, published in 1925 in the *Journal of the American Medical Association*, he showed that "the declining output of medical schools aggravated shortages of physicians in poor and rural areas, but regional inequalities in the availability of physicians had actually been increasing since the Civil War."[9] Few physicians practiced in Southeastern Kentucky in the 1920s, so the area proved suitable for Mrs. Breckinridge's purposes.

The Patronage Strategy: Constructing Colonialism

The planning and marshalling of financial resources for the FNS began several years before its founding. Breckinridge's ability to meticulously devise an organization such as this surprised no one who knew her. Many of the events of the earlier years of her life inspired her to found the FNS, and her own experiences as a mother who lost two children while living in a remote rural area gave her a particular sense of the desperation of isolated parents. Through her family connections, she also had a great advantage when she began to pull together funds for her health care demonstration. She was able to establish a patronage network.

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[9]Paul Starr, *The Social Transformation of American Medicine*, 125.

The Breckinridges have been, and remain, a very prominent family in both Kentucky and Arkansas. Mary's great-great grandfather, John Breckinridge, worked as Thomas Jefferson's attorney general. Her grandfather, John Cabell Breckinridge was Vice-president under Buchanan, Major-General of the confederacy, and its last Secretary of War. Clifton Rhodes Breckinridge, Mary's father, acted as Congressman for Arkansas, and later President Cleveland appointed him as minister to Russia. Born in 1881, Breckinridge spent many of her formative years in Washington D.C., St. Petersburg, and Moscow.[3] Educated by tutors and governesses, she expressed frustration at her lack of formal education, and at the fact that her mother felt it improper for her to continue her education beyond her early teenage years. It was not until after her first marriage, at the age of twenty-five, that Mary Breckinridge attended the St. Luke's Hospital School of Nursing, New York City.

Breckinridge married Henry Ruffner Morrison in 1904. Shortlived, the marriage ended in the first year with his untimely death. After the death of her husband, Breckinridge travelled and stayed with friends and relatives

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[3]Mary Breckinridge burned all personal correspondence and journals shortly before her death. Therefore, accounts of her early years must rely almost solely on her autobiography, *Wide Neighborhoods* (New York: Harper & Bros., 1952).

for a few years, but felt restless and useless. A friend of the family, Dr. William Polk, suggested that she enter St. Luke's Hospital School of Nursing. Of this she says, "my application was accepted, and in February, 1907, after a desultory and hesitant period of more than a year of widowhood, I entered the spring class at St. Luke's."[10]

After leaving St. Luke's with a certificate of nursing, Breckinridge went to live with her parents in Fort Smith, Arkansas. Here she met and married her second husband, Richard Ryan Thompson, in 1912. She moved with him to Eureka Springs, Arkansas where she had two children, Breckie and Polly. Both children died at an early age, and their deaths started her on a quest to improve the lives of mothers and children in remote rural areas. Breckinridge felt that her son would have survived if they had been nearer to adequate health care services.[11] While in Eureka Springs, she sat on several public health boards, worked as the secretary for the local suffrage movement, and created and taught a course on child care at Crescent College, where her husband was president. Shortly after the death of her children, Mary Breckinridge divorced her husband. She chose to end her second marriage after nursing her husband's

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[10]Mary Breckinridge, *Wide Neighborhoods*, 52.

[11]Nancy Dammann, *A Social History of the Frontier Nursing Service* (Sun City, AZ: Social Change Press, 1982).

mistress through a miscarriage.[12] As Nancy Dammann has so dramatically put it:

> So ended all attempts for a normal family existence with the children she so badly wanted. Mrs. Breckinridge devoted the balance of her life to planning, organizing, and administering the Frontier Nursing Service.[13]

After her divorce, at the end of World War I, Breckinridge volunteered for the American Committee for Devastated France (CARD), where from 1919-1921 she worked as director of child hygiene and district nursing. Breckinridge was stationed in Vic-sur-Aisne, a town in northern France that had been devastated by the war. She coordinated food and medical relief for some seventy villages.[14] This is where she first came into contact with the registered nurse-midwives of Britain. She greatly admired their extensive training and their efficient management of patients, and she began to think that registered nurse-midwives could be the answer to the problems of rural health care in the United States.

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[12]Helen E. Browne, Interview by Carol Crowe-Carraco, 26 March 1979, interview 79OH173 FNS74, transcript, Frontier Nursing Service Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

[13]Dammann, *Social History*, 3.

[14]Nancy Schrom Dye, "Mary Breckinridge, the Frontier Nursing Service, and the Introduction of Nurse-Midwifery in the United States," in *Women and Health in America*, ed. Judith Walzer Leavitt (Madison: University of Wisconsin Press, 1984), 329.

The 1923 Investigation: Making the Case for Intervention

Upon her return to the states in 1921, Breckinridge attended courses in public health nursing, education, and psychology at Teacher's College, Columbia University. By this time she had some idea that she wanted to start a program similar to CARD in the United States. She did not receive a degree from Columbia, for that was not her goal. Instead, her goal was to take courses which would prepare her to study the state of rural health care services in the U.S. In the summer of 1923 she conducted an investigation into the availability of health care in Appalachian Kentucky. To this end, she conducted interviews with fifty-three local midwives in order to determine what practices they used and the conditions under which they worked. The published article and the unpublished notes taken during these interviews reveal Breckinridge's attitude toward the granny and lay midwives, and demonstrate her early effort to construct the area and its inhabitants as colonial. While she recognized that they were performing an invaluable service and that in many cases they practiced out of necessity rather than choice, she could not contain her disgust at the conditions under which some of the women worked. She failed to make any distinction between the granny and lay midwives, lumping them all under the term "granny" which was already widely understood to be

synonymous with "incompetent."

She divided the midwives into three categories: "clean, fair, and dirty" and posited that each gave "a rough indication of the level of intelligence as it applies to their persons and their homes."[15] Breckinridge referred to the families she was investigating as *tribes* [my italics], and treated all their medical practices as quackery. Or, at best, as treatments that might have had some useful application if a fully qualified person would have experimented with them. She related several of the questionable practices of granny midwives, especially in the treatment of hemorrhage during and after delivery. Much of the article's tone was one of thinly veiled condescension. In writing of a particular midwife's practice of quoting the bible during a woman's hemorrhage, Breckinridge states: "What she had found most helpful was just to lay her hand on the woman and repeat a verse from the Bible which a preacher had given her. . . . This she said she had also tried successfully on a dehorned steer which was bleeding to death."[16] Breckinridge was appalled to find that none of the midwives did anything to provide the mothers with

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[15]Mary Breckinridge. "Midwifery in the Kentucky Mountains: An Investigation in 1923." reprinted from the *Frontier Nursing Service Quarterly Bulletin* (FNS Papers, Vol. 17(4), Spring 1942), 6.

[16]Ibid., 24.

aseptic conditions. And, although several of the women had attended state run classes on birthing and had been given bottles of silver nitrate for the babies eyes, only three of the women reported using the drops on a regular basis.[17] This initial study completely convinced Mrs. Breckinridge of the need to bring the benefits of modern science and medicine to the mothers and children of Appalachian Kentucky. She built up a case for intervention and provided a rationale for her organization.

In one area, the investigation failed to give Breckinridge the information she required to construct a solid case showing the magnitude of the need for her to intervene. She felt she could find no way to obtain an accurate idea of the maternal and infant mortality rates of the counties in question. But she had to claim these high rates existed in order to prove that the mountain people lacked the modern medicine and technology that she could provide. She visited graveyards to see how many infant graves each contained, and she asked each of the

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[17]Drops of silver nitrate were placed in newborn's eyes to prevent infection and possible blindness. If the mother had a venereal disease, the conjunctivae of the infant could easily be infected as its head moved through the cervix and vagina. By the seventies, the drops had been replaced by several different antibiotics that could prevent infections more effectively. Source: Jean Towler and Roy Butler-Manual, *Modern Obstetrics for Student Midwives* (Chicago: Year Book Medical Publishers, Inc., 1973), 660.

interviewees how many mothers they had lost during and after delivery. Not satisfied with the responses she received, Breckinridge assumed that the midwives were lying to her. She found only two cases of puerperal fever reported in the 988 births for the year 1922, and only a handful of midwives admitted to ever losing a mother. Of this Breckinridge said:

> Rarely ever did I feel that the statements given me regarding maternal deaths and stillbirths were accurate. A number of the midwives who had been practicing for years declared that they 'never lost a mother or child.' One who said she had had 'upwards of a thousand' deliveries had only lost two mothers. The one in Leslie who could 'figger' and who had counted 590 babies in over 50 years admitted but two stillbirths and said she had lost 'nary woman.'. . . Another in Knott, who has the reputation of losing many mothers, and lost one of her own daughters from hemorrhage, said without questioning that 'everybody lost women.'[18]

We could assume that the midwives would have been hesitant to discuss maternal and infant deaths, seeing such figures as evidence of their own shortcomings, and so it is likely that the rate was higher than they reported. But, nowhere have I found any indication that the maternal and infant mortality rates were as high as many in the FNS have claimed. Over and over in the literature pertaining to the work of the nurses the authors mention the high mortality rates in this area before FNS' establishment, and the source

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[18]Breckinridge, "Midwifery Investigation," 22.

they point to is this initial investigation. Yet, the quote above shows that Breckinridge could find no definitive information on this subject. So it seems that everyone concerned just decided that the mortality rates had to have been high before the coming of the FNS. Such a strategy not only fit the colonial construction, but also made their own low maternal and infant mortality rates look that much better. This belief in the existence of high mortality rates before the FNS' establishment is a perfect example of the colonial mentality of the FNS. They assumed that conditions had to have been wretched and primitive before they came to the rescue with the aid of modern medicine. FNS nurse-midwives shared these assumptions with others who had come before them. "Just as the local colorists persuaded themselves that Appalachia was 'unknown' because they had never been there, [and] the home missionaries persuaded themselves that Appalachia was 'unchurched' because their own denominations were not represented there," the FNS persuaded themselves that Appalachia was unhealthy because they had not yet been 'given' modern medicine.[19]

For part of this initial investigation, Dr. Ella

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[19]Henry D. Shapiro, *Appalachia on Our Mind* (Chapel Hill: Univ. of North Carolina Press, 1978), xiii. The local colorists were a group of writers who focused on Appalachia at the turn of the century. They are discussed in Chapter Three.

Woodyard travelled and worked with Mary Breckinridge. Dr. Woodyard had a position at the Institute of Educational Research of Teachers College, Columbia University. Breckinridge had requested that Dr. Woodyard accompany her in order to administer the Stanford Revision of the Binet-Simon test to local children. Her reason for doing this was to prove that the intellectual capacity of mountain children was no lower than that found among the general population of the United States. This testing process reflected Breckinridge's 'Enlightenment' assumption that intelligence is universally distributed. She had to show that the mountain people could be educated and reformed. They had to be redeemable or her particular colonial construction would not work. She says, in her justification of these tests:

> I knew that a question would often arise in the minds of thoughtful people when confronted with the stark facts I had to describe: Are these eighteenth-century conditions really due to isolation or is there a lack of native intelligence?[20]

These "thoughtful people" of whom Mary Breckinridge speaks were part of her patronage network- her affluent friends and family members from whom she wished to gain financial support, and also potential state and federal foundations to which she could apply for grants. Dr. Woodyard's test results revealed that the children of Leslie, Owsley, and

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[20]Breckinridge, "Midwifery Investigation," 4.

Perry counties were above the average for U.S. children with the exception of only one child. Breckinridge ultimately concluded that "among the old midwives, as among the young children, we have a range of intelligence that includes the extremely stupid and the very able."[21]

Establishing the Kentucky Committee for Mothers and Babies

After concluding her investigation and leaving the area, Mary Breckinridge simultaneously prepared to leave for Britain to become a registered nurse-midwife, and proposed a health care project to the Child Health Association in which she asked that the public funds made available by the Sheppard-Towner Maternity and Infancy Act be used to support her project.[22] The Child Health Association asked Dr. Annie Veech, who headed Kentucky's Bureau of Maternal and Child Health, to evaluate the project. At this point, Breckinridge's proposal hit a snag. Veech did not agree with Breckinridge's assessment of Kentucky's lay midwives. She accused her of exploiting and misrepresenting mountain people.[23] This accusation would become a familiar one over

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[21]Ibid., 5.

[22]The Sheppard-Towner Act, passed by Congress in 1921, was aimed at reducing infant and maternal mortality. The Act provided matching funds to the states for prenatal, infant, and child health centers. Starr, *Social Transformation*, 260.

[23]Dye, "Mary Breckinridge," 332.

the years, and it is one with which the FNS still has problems. In at least one respect, Veech was right. She recognized Breckinridge's strategy for what it was- a colonial construction designed to gain support for the FNS from wealthy philanthropists. Breckinridge, throughout her life, preferred to emphasize the remoteness and backwardness of Leslie and the surrounding counties. Afterall, the more remote the area in which she worked, the more she could prove that her demonstration was a success.

Part of the problem that Breckinridge encountered in her correspondence with Dr. Veech appears to be that Veech did not feel Breckinridge had gone through the proper channels. In addition, Veech felt that Breckinridge was directly challenging her authority and expertise. In a letter dated Oct. 31, 1923, Dr. Veech wrote:

> We have every type of people with which to deal. In our contact with them, so far as I know, we have not been criticized and they have gladly taken our suggestions and followed along with us. We have closely worked with the National Children's Bureau and the American Child Health Association, besides all of our state organizations. Each one has been willing to take absolutely our outlined policy for work in the state. *They have not come to us suggesting how we should do things, but knowing our experience here have come asking how they could help to do things as we thought best.*(italics mine)[24]

She concluded this same letter by stating that she could not

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[24]Dr. Annie Veech to Mary Breckinridge, Oct. 31, 1923, FNS Papers, Special Collections, Margaret I. King Library, University of Kentucky, Lexington.

support Breckinridge's plan as it had been formulated and that she would also recommend that the Child Health Association not support it. In her reply to the above letter, Mary Breckinridge thanked Dr. Veech for her attention to the matter and told her that she would not bother the bureau for help again. This did not mean that she had given up on the project, but rather that she had decided to pursue other alternatives to finance her project. She says of this matter: "It is not usual I know, for public interests to take the initiative in pushing forward with new ideas. Private initiative almost always blazes the trail."[25] With this turn of events, Breckinridge seems to have lost all hope for public funding, and to have refocused her energies on creating a private funding network to support her endeavor. Her background and connections were crucial in making this network viable. This choice to rely on private funding had a great impact on the future of the FNS.

Mary Breckinridge did go to Britain, where she attended the British Hospital for Mothers and Babies, and received her certification as a registered nurse-midwife. She then went to Scotland and toured the Highlands and Islands

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[25]Mary Breckinridge to Dr. Annie Veech, Nov. 14, 1923. FNS Papers, Special Collections, Margaret I. King Library, University of Kentucky, Lexington.

Medical Service, which, along with the structure of CARD, influenced the shape of the FNS. Upon her return to the States in 1925, Breckinridge immediately set about organizing her health care demonstration for Kentucky. Instead of relying on the state for help, Breckinridge called on her wide network of personal friends and family connections to fund the Kentucky Committee for Mothers and Babies as a private philanthropic organization.[26] She created a system of patronage that assured the FNS of funding by winning the support of prominent socialites, politicians, and physicians in many of the major U.S. cities. To this end, she toured incessantly, speaking of the plight of mothers and babies. She constructed a colonial situation that begged for the intervention of monied, urban philanthropists.

She was an eloquent speaker and writer, often engaging in a rhetoric in which she compared childbirth to war. This metaphor worked quite well from the founding of the Committee all the way through World War II. The young woman's battlefield was childbirth, "here the hazards for Americans throughout our years as a nation have been greater than the hazards of war, and with higher casualties. Death and mutilation-mutilation and death, that is the lot of

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[26] Dye, "Mary Breckinridge," 333.

thousands of women every year throughout the generations."[27] This particular talk also had an accompanying chart which showed that the deaths of women in childbirth exceeded the nation's casualties of war. All of these lectures and promotional articles ended with a request for the benevolent listeners to help fill a nurse's saddlebags.

Mrs. Breckinridge set up women's committees consisting of wealthy socialites in New York, Boston, Chicago, Detroit, Minneapolis, St. Louis, Louisville, Cincinnati, Dayton, Richmond, Pittsburgh, Lexington, and Washington D.C. At the time of the founding of the FNS only a few of these committees were in place, but by 1931 fifteen city committees supported the work of the nurse-midwives.[28] Each committee's endeavors were very similar to those of overseas missionary efforts. They held fund raisers for the Committee throughout the year. They also collected clothing, shoes, toys, food, and medical supplies for the residents of Leslie County. They shipped these supplies by train to the closest endpoint of the railroad, the Krypton spur, and then used horses and wagons to haul them over the last thirty or so miles of mountainous terrain. The

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[27]Mary Breckinridge, "Childbirth and War." reprinted from the *Quarterly Bulletin of the Frontier Nursing Service, Inc* (FNS Papers, Vol. 18(2), Autumn 1942), 4.

[28]Helen Tirpak, "The Frontier Nursing Service-- An Adventure in the Delivery of Health Care" (Ph.D. Diss., Univ. of Pittsburgh, 1974), 52.

committees functioned effectively, and some of them still provide a major portion of private support for the service.

Breckinridge spent approximately three months out of each year travelling among the city committees and making speeches to raise funds. She was, by all accounts, an eloquent speaker. Agnes Lewis, who worked as Breckinridge's personal secretary for years, often served as her travel companion on fund raising trips. She said of the fund raising speeches:

> She [Mary Breckinridge] was very dramatic. She would play it up. . . . If it were in the winter time, she would play up the weather, the floods, the landslides, the breakdown in pumps, and summer time, it was the lack of water, running the hospital without water, and all that sort of thing. Oh, she could make it very graphic.[29]

The other comment often made about these speeches was that Mrs. Breckinridge never directly asked for a single dime. Even so, or perhaps because of this, given her particular audience, she seems to have been a highly effective fund raiser.

Once the initial funds were raised, the Kentucky Committee for Mothers and Babies, which then consisted of Breckinridge and two British nurse-midwives, set to work building the first center and a home for Mary Breckinridge.

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[29]Agnes Lewis, Interview by Dale Deaton, 5 January 1978, interview 82OH04 FNS146, transcript, Frontier Nursing Service Oral History Collection, Margaret I. King Library, University of Kentucky, Lexington.

The Articles of Incorporation, written in 1925, explicitly set out the future goals of the institution:

> To safeguard the lives and health of mothers and children by providing and preparing trained nurse-midwives for the rural areas in Kentucky and elsewhere, where there is inadequate medical service; to give skilled care to women in childbirth; to establish, own, maintain and operate hospitals, clinics, nursing centers, and midwifery training schools for graduate nurses; to educate the rural population in the laws of health, and parents in hygiene and child care; to provide expert social service, to obtain medical, dental, and surgical services for those who need them at a price they can afford to pay, to ameliorate economic conditions inimical to health and growth, and to conduct research towards that end; to do any and all other things in any way incident to, or connected with, these objects, and, in pursuit of them, to cooperate with individuals and organizations, whether private, state or federal; and through the fulfillment of these aims to advance the cause of health, social welfare and economic independence in rural districts with the help of their own leading citizens.[33]

This statement of the goals of the service has remained the same throughout its existence.

After the Kentucky Committee for Mothers and Babies had been successfully incorporated, Breckinridge set about structuring the institution along the same lines as the Highlands and Islands Medical Service and CARD. The corner stone of this model consisted of several small outposts where the nurse-midwives lived and worked, and where they catered to the health care needs of the population living in

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[33]Articles of Incorporation, Oct. 1925, FNS Papers, Special Collections, Margaret I. King Library, University of Kentucky, Lexington.

the approximately ten square miles surrounding each station. Eventually, eight of these nursing centers opened, each staffed by two registered nurse-midwives.[31] At first, the nurse-midwives went around to local families, introduced themselves, and explained the purpose of the Committee. Then, they waited for expectant mothers to come to them. Through the mothers they were able to register the entire family for care. This method of introducing themselves and then waiting for a response seems to have worked well. Slowly, they built up a patient base, and there are very few mentions of difficulties in attracting potential patients. The Committee grew quite rapidly as the nurse-midwives attended the local women through pregnancy, delivery, and recovery. But their job was much broader in scope than this. They cared for the entire family. They provided

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[31]The eight centers were created mainly through the donations of wealthy patrons who generally dedicated the center to a dead mother or sister. Each was known commonly by a name which revealed its geographical location, rather than by the name given in dedication (here listed in parentheses). The centers were: Hyden, est. Sept. 1, 1925; Wendover, est. March 1, 1926; Beech Fork (Jesse Preston Draper), land deeded Oct. 1926; Confluence/Possum Bend (Frances Bolton), land deeded July 1927; Red Bird (Clara Ford), land deeded March 1928; Flat Creek (Caroline Butler Atwood), est. 1929; Bowlington (Margaret Durbin Harper), est. late 1929; and Brutus (Belle Barrett Hughitt), est. 1930. A ninth center, Wolf Creek, was created in 1960 to take the place of Bowlington. From 1978-1992 the FNS, in cooperation with the Pine Mountain Settlement School, operated a tenth center in Harlan County (many thanks to Anita Puckett for bringing this center to my attention).

check-ups, vaccinations, information on hygiene and child care, and when necessary, they recommended that patients in need of more care go to either the small hospital at the headquarters in Hyden, or for more serious cases, to the hospitals of Lexington, Louisville, or Cincinnati.

The Frontier Nursing Service

In 1928 Breckinridge changed the name of her organization from the Kentucky Committee for Mothers and Babies to the Frontier Nursing Service. None of the literature on the FNS has seen this change as unusual or important, but I would suggest that this switch represented a wise strategy on the part of Breckinridge. In changing to a name with "frontier" in the title, she emphasized the images conjured up by this word. For potential employees of the service the word meant adventure, rugged individualism, and a chance to go to a place where they could put their idealism and missionary zeal to use. And for the funders of the FNS, "frontier" meant isolated, remote, and in need of financial help.

The FNS represented a unique institution in that it was an organization created by women, run by women to care for women. In respect to the services offered by the nurse-midwives, the FNS was not as singular as many of those who have written about it have postulated. The FNS' philosophy

of providing preventive medicine for the whole family closely resembled attempts made in the previous decade to establish community health centers, and it may be that Breckinridge drew on the philosophy of the health center movement when she determined exactly what role the nurse-midwives would play as health-care providers. This would make a great deal of sense, given that the focus of the health centers was to break the connection between disease and poverty. According to Gertrude Isaacs, Breckinridge's philosophy in this respect was

> health care v. medical intervention. Now, Mrs. Breckinridge recognized the importance of health care. . . or medical care, because she felt that we needed to work as team. But, she said, 'One physician should be able to take care of ten thousand, if he has nurses doing good health care in the community.[32]

This conception of local health care needs matched the understanding which contributed to the health center movement. The centers were created to meet the complex health needs of people living in poverty. Their creators recognized that the existing health care system could not satisfactorily meet these needs.[33] After World War I, many

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[32]Gertrude Isaacs, Interview by Dale Deaton, 15 November 1978, interview 79OH79 FNS35, transcript, Frontier Nursing Service Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

[33]George Rosen, "The First Neighborhood Health center Movement: Its rise and Fall" in *Sickness and Health in America*, Judith Walzer Leavitt and Ronald L. Numbers, ed. (Madison: Univ. of Wisconsin Press, 1985), 475.

different social welfare agencies created health centers and health demonstrations all across the United States.[34] Breckinridge, who was taking many nursing and public health courses during this same period, was certainly aware of the movement. "The health center movement began between 1910 and 1920, drew considerable attention through the thirties, and then faded, eventually to be revived in a quite different form in the 1960s."[35] Breckinridge's particular health demonstration exemplified the philosophy of the health center movement, and should be considered one of the more successful and enduring programs to be set up in this time period.

The FNS differed from other health centers in that most of them consisted of a single building which combined a clinic and dispensary. They did not rely on house calls as heavily as the FNS did. Because no paved roads existed, the nurses travelled by horseback to make their visits. They carried all of their supplies in two sets of saddlebags, one for deliveries, and one for general medicine. In each set of saddlebags they kept midwifery and medical routines which

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[34]George Rosen, *A History of Public Health*, with an introduction by Elizabeth Fee, biographical essay and new bibliography by Edward T. Morman (Baltimore: Johns Hopkins Univ. Press, 1993), 448.

[35]Starr, *Social Transformation*, 194, and George Rosen, *A History of Public Health* (Baltimore: Johns Hopkins Univ. Press, 1993).

outlined the procedures to be followed under every imaginable situation. The routines were written by the head midwifery nurse and the medical director of the FNS, but they could not be used until they had received the full approval of the Medical Advisory Committee.[36] This committee, created by Breckinridge, insured that the FNS nurse-midwives operated with the full approval of a group of Lexington and Louisville physicians. Any questions concerning proper medical procedures could also be addressed by the National Medical Council and the National Nursing Council, two more boards set up by Breckinridge to assure that she had the support of the medical establishment, and to protect the service from the kinds of attacks that other midwives in the United States had faced.

Mary Breckinridge set up the headquarters of the Kentucky Committee for Mothers and Babies 4.5 miles from Hyden, the county seat of Leslie county. The headquarters, called Wendover, served as a central location for the storing of records, for the stabling of a large number of horses, and it had a small hospital that grew gradually over the years and eventually moved into Hyden. In 1925, when the Committee was established, Hyden had a population of

[36]The early Medical Advisory Committee was made up of prominent physicians from Lexington and Louisville. It later expanded to include some doctors from outside Kentucky.

313, and the nearest paved road was sixty miles away. The remoteness of this town suited Mrs. Breckinridge's plan perfectly. If the organization could be successful in Leslie county, then Breckinridge felt it should work anywhere. According to Criss, "this area was chosen for another reason. Fifteen thousand people lived in a thousand square mile area without benefit of one resident state-licensed physician."[37] This statement is at odds with another taken from an interview with Drs. Wiss and Fox, who worked as Medical Director and Assistant Medical Director of the FNS for a time. According to the interview, when Breckinridge conducted her investigation, there were two medically trained doctors and a pharmacy in Hyden. She never mentioned this in the investigation or in subsequent publications.[38] These physicians had little or no impact on the development of the service, and they did not diminish Breckinridge's control in determining the overall direction of the FNS. She superimposed her organization on a remote area while ignoring the health care providers who came before her.

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[37]Barbara Ann Criss, "Culture and the Provision of Care: Frontier Nursing Service 1925-1940" (Ph.D. Diss., Univ. of Utah, 1988), 56.

[38]Dr. Mary Wiss and Dr. Pauline Fox, Interview by Dale Deaton, 14 February 1979. Interview 82OH05 FNS148, transcript, Frontier Nursing Service Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

The headquarters at Wendover and the seven nursing centers scattered throughout the county made up the technological infrastructure of the FNS. A courier system for transporting supplies, mail, and messages from headquarters to the centers, and vice versa, and also from headquarters to the outside world and back held the network together. This system was a direct result of Breckinridge's experiences in working with CARD after World War I. The FNS courier system closely resembles that employed by CARD. Interestingly, no information or supplies went directly from the outside to the centers, everything flowed through the headquarters, and Mary Breckinridge supervised it all. She very wisely tied the courier system into her funding network. The vast majority of couriers were eastern society girls who helped out during the summer, and quite often the courier's parents became contributors to the FNS. Later, after the couriers grew up, married, and had children of their own, their children became the next generation of couriers and the former couriers often went to work on one of the city committees. Breckinridge recruited her couriers by delivering talks at expensive prep schools and by courting the children of her city committee members. In her interview Nancy Dammann, a courier in the sixties and the FNS public relations person in the seventies, noted the requirement that the couriers be good horsewomen, "and

people didn't ride horseback who didn't have a little money. It was almost guaranteed. Then, the idea was that after you saw it and became sold on FNS, you would go back and be involved in the city committee."[39] A controversial article by T.S. Hyland, science journalist and editor, appeared in *Life* magazine in 1949. The author called the courier system Breckinridge's "publicity masterpiece," and contended that it "made Leslie County the debutante's Foreign Legion. Eastern society girls-who sometimes apply years ahead, as to a fashionable school-come in relays to spend a couple of months riding with messages and supplies among the isolated centers."[40]

Staffing was a problem. Often, the FNS could not find couriers for the winter months, and they had some difficulties keeping a full staff of nurse-midwives. This was especially true during World War II. Up to that point, the FNS had been almost entirely staffed by British nurse-midwives. A few nurses from the United States had gone to Britain to get their certification, but when the war began, all the British nurse-midwives decided to return to Europe to care for wounded and dislocated civilians and soldiers.

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[39]Nancy Dammann, Interview by Dale Deaton, no date, interview 82OH40 FNS183, Frontier Nursing Service Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

[40] "The Fruitful Mountaineers," *Life*, 26 December 1949, 65.

To solve the staffing problems Breckinridge opened the Frontier Nursing Service Graduate School of Nurse-Midwifery on November 1, 1939.

From its inception, the school provided a way for American nurses country to be certified as midwives and it attracted large numbers of American and Western European nurses from Africa, Europe, Southeast Asia, and South America. It should be made clear that the nurses attracted from these diverse areas, up to the time of Mrs. Breckinridge's death were all white nurses who had previously been in the field as missionaries of one sort or another. No nurses of color ever trained or worked at the FNS until after 1965. The school trained several nurses who remained to staff the FNS, but it did not completely alleviate staff problems. The FNS historically had a small core of people who spent a significant amount of their lives working for the service, and a much larger body of short term, generally two year, employees.[4]

Until the mid sixties, the FNS periodically also suffered staff shortages as a result of funding problems, and there are several instances in the history of the

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[4]Two years was the standard time most FNS nurse-midwives contracted to work. If the nurse had come to the FNS to obtain certification, and had accepted a scholarship from the FNS, then she agreed to work two years after certification as part of her financial aid award.

service where the nurses agreed to work without compensation for months at a time. From the beginning, the network of private funding that Breckinridge set up operated sporadically at best. The FNS seems to have gone through cycles of poverty and plenty. They always had problems maintaining enough money for daily operations, but found it quite easy to obtain the larger gifts required to build new nursing centers or hospital wings.[42] But this sporadic funding did not inspire Breckinridge to seek more consistent public funds. After her initial negative experiences with public funding, she did not attempt to secure large grants of public funds either at the state or federal level. At one point in the late twenties Breckinridge worked to get the Sheppard-Towner Act extended in the hopes of getting some funding as a result, but the efforts of the Act's proponents failed, and Congress allowed it to expire. Only once in Breckinridge's lifetime did the FNS accept public funds. During World War II the FNS received funds from the Emergency Maternal and Infant Care Program. This program provided money to take care of the wives and children of servicemen while they were away.[43] Other than this small

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[42]Helen Tirpak, "Adventure in Health Care", 113.

[43]Helen E. Browne, Interview by Carol Crowe-Carraco, 26 March 1979, interview 79OH173 FNS74, transcript, Frontier Nursing Service Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

amount of public funding, FNS operated without it. Occasionally government agencies approached Breckinridge with funding opportunities, but she refused their funds because she did not wish to deal with the strings attached to them. By running the FNS as a private philanthropy, Breckinridge maintained total control over all aspects of the service and over the image it conveyed to outside funders. She had the final say on where funds went, how people were trained, and the price of fees for various services. Breckinridge also had a rubber stamp Executive Committee who backed up everything she did with very few questions.[44] Still, inadequate funding created a perpetual source of problems.

The Depression stressed the bank account of the FNS. Appalachia was particularly hard hit by the Depression. Many of the families who had left earlier to find jobs in Dayton, Cincinnati, and Detroit came back when their jobs disappeared after the stock market crash. They returned with no livestock, no food, no money, and no land, and they came to an area where the local residents had already

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[44]The role of the executive committee in backing up the wishes of Mary Breckinridge is discussed extensively in the two interviews with Helen E. Browne. One interview is cited in note 43. Helen E. Browne, Interview by Dale Deaton, 27 March 1979, interview 79OH174 FNS75, Frontier Nursing Service Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

suffered a great deal due to a lengthy, ill-timed drought. At this same time, funding from the committees of the various large cities slacked off almost completely. The citizens of these committees suddenly had pressing economic problems to deal with in their own locales, and could ill afford to send money to Appalachia. World War II placed a similar economic burden on the FNS. The money of the city committees again went elsewhere.

The Service had to rely on outside private funding for support because it always kept fees for services well below the actual cost. For the first twenty years the midwifery fee remained at $5.00 for prenatal care, delivery, and postpartum checkups of mother and child. The fee for a hospital delivery of a mother who was capable of delivering at home but refused was $25.00 in this same period. In December 1945 the midwifery fee increased to $7.00, and from that point it continued to go up every few years. In 1949 T.S. Hyland, commenting on the funding structure of the FNS, wrote, "although she charges the mountaineers $15.00 (if they can pay at all) for each baby delivered, more than 90% of her $160,000 budget is raised amidst the genteel tinkling of teacups."[45] In 1961 the midwifery fee reached $50.00. This fee applied to people inside or outside the area, at

[45]T.S. Hyland, "Fruitful Mountaineers," 65.

home or at the hospital, and care was still free to anyone who could not afford to pay.[46] But rarely in the Service's history did anyone not pay the bill in some form. They bartered for services, worked off the bill, or just paid outright with cash.[47] From the mid-sixties on the fee increased rapidly as the FNS began the transformation into a more generic public/private community hospital and assumed a diminishing role as a philanthropy.

The FNS in Transition: Change and Accommodation

The late fifties and early sixties marked a time of great change for the FNS. Earlier, in about 1950, Mary Breckinridge began writing her autobiography. Proceeds from the sale of *Wide Neighborhoods*, published in 1952, went directly to the FNS. During the writing of the book, Breckinridge relinquished much of the control of the organization to a handful of trusted, long-time staff

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[46]Helen Tirpak, "Adventure in Health Care," 128.

[47]One nurse who was interviewed for the FNS Oral History Project told of a woman who, in 1959 began trading eggs for money from the hospital's petty cash fund to pay her bill. After two and one-half years she managed to pay for her delivery and subsequent cholecystectomy. Molly Lee cited this as just one "example of how proud some people were and how they would work out their bill."Molly Lee, Interview by Carol Crowe-Carraco, 6 February 1979, interview 80OH35 FNS133, transcript, FNS Oral History Collection, Margaret I. King Library, Lexington. See also, Mary Penton, Interview by Dale Deaton, 15 June 1979, interview 80OH32 FNS130, transcript, FNS Oral History Collection, Margaret I. King Library, Lexington.

members. Helen E. Browne, the assistant director gained an enormous amount of responsibility for running the FNS, and she kept it until 1965 when she became director after Breckinridge's death. In speaking of the period from 1950-1965, both Browne and Agnes Lewis commented that Breckinridge's role in making decisions gradually decreased through these years. But, at the request of Breckinridge, they held morning meetings in her bedroom in which each gave a report of what was happening in various aspects of the service. And, in the afternoons she received a field report of the activity at the outpost nursing centers. Browne, in speaking of the meetings, said that they kept Breckinridge informed, but that they did not really function as a way for her to continue to make all the decisions. They were meant to allow her to feel as though she were still making all the decisions, and originally they were only supposed to continue until the book was done. But Mrs. Breckinridge, seventy at the time she began the book, never assumed full control of the FNS after publication.[48]

Although Browne and Lewis began making administrative decisions for the FNS, the 1950s were a decade of stasis. Nancy Dammann attributed the responsibility for this stagnation to those same women who assumed control for Mrs.

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[48]Agnes Lewis,interview, FNS Oral History Collection, and Helen E. Browne, interview, FNS Oral History Collection.

Breckinridge. She felt that Lewis and Browne were too close to Mrs. Breckinridge to do anything with which she might not agree. And she also thought that the FNS had always been Mrs. Breckinridge's only child that survived. As Dammann saw it, the FNS had served as Breckinridge's life mission. It kept her going. And, as she grew older and the FNS fulfilled its purpose, she began not to care what happened to it after she was gone.[49] This interpretation is confirmed by others associated with the service. Helen Browne, for example, admitted that it was a difficult time. One problem she emphasized was that no one in the administration had a strong enough personality to square off with Breckinridge and win. Browne also told of an incident that clearly showed Breckinridge's opposition to change:

> She did not want a bridge across the river at Confluence. Confluence was still a center. And there's a swinging bridge at Confluence, there's not a highway bridge. And the bridge across the river at Dry Hill [where Mrs. Breckinridge persuaded authorities to place it] just really goes to nowhere. . . . She didn't want [the] Confluence area made too sophisticated. She still realized that the value of the demonstration purposes was to have outposts in remote areas. So that people found it harder to get anywhere else. [50]

The bridge at Dry Hill, which led to nothing, ultimately came to be known as "Mary Breckinridge's Folly."

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[49]Nancy Dammann, interview, FNS Oral History Collection.

[50]Helen E. Browne, Interview, FNS Oral History Collection.

Another move that Breckinridge resisted was the one from horses to jeeps. The nurses and couriers of the FNS had always ridden horses, and many at the service cherished the horses as much as they did the people. Initially, they needed the horses because any other type of travel was impossible. But after the roads improved, the FNS began to use a few jeeps, while still relying mainly on horses. "Horses didn't get stalled in the middle of a flooded river nor slide off an icy curve in the road. They responded when you talked to them. But they couldn't cover the distance that Jeeps could once graded roads were available."[51] Breckinridge was also reluctant to give up the horses because they were tied to the FNS' private funding network. Wealthy members of Bluegrass society donated very good horses and the fodder for their upkeep, and along with these they often made monetary donations directly to the service. It did not seem nearly so glamorous to donate a jeep as it did to donate a well bred horse. In addition, the couriers would no longer need to be wealthy debutantes who were good horsewomen if they only had to know how to drive a jeep. For all of these reasons, but mainly because Breckinridge wanted to keep them, the horses remained the main form of

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[51]"Frontier Nursing Service: Women and Horses Meet the Challenge," *The American Saddlebred* 5 (September/October 1987), 52.

transportation until after her death. In the later years of her life Breckinridge abhorred change, and she refused to completely relinquish her control over the FNS.

As Breckinridge became more difficult to deal with staff turnover increased dramatically, and the FNS often went without a medical director. When Dr. Beasley, the FNS' medical director for much of the fifties, left to study tropical medicine in London he told Helen Browne that if the service did not do something about this stagnation it would "fall flat on its face."

The counties served by FNS did not remain frozen in time as the FNS did. Leslie County, for example, experienced many changes around 1950. Because of its remote location, and lack of transportation network, the County's coal reserves were among the last in Southeastern Kentucky to be exploited. Except for a brief resurgence in the early 70s during the oil crisis, the coal boom in the county really only existed throughout the forties and early fifties. By the 1954 the boom had collapsed, and industries centered around logging also went into decline. By 1963 approximately 90% of area income came from unemployment checks, pensions for disabilities, and from state employees of the Board of Education and the Highway Department. By 1965, 75% of the population had no other income than

welfare.[52] From 1950 to 1960 approximately 19% of the population in the county left the area.[53] This departure of residents caused a corresponding drop in the birth rate of the county, and the nurses of the FNS began to emphasize preventive medicine more than they had in the past. In 1957, Breckinridge agreed to allow the Frontier Nursing Service to take part in the clinical trials of Searle Pharmaceutical Corporation's new oral contraceptive Enovid. The trials got underway in 1958 and they ultimately led the FNS to create a more comprehensive family planning program in the sixties. This program further reduced the local birth rate by a significant amount. The clinical trials of Enovid, and the extended family planning program that resulted from them markedly changed the goals and practices of the FNS. These changes will be discussed extensively in Chapter Two. During the same years home deliveries decreased, while hospital deliveries increased by 19%.[54]

Changing Course: The Death of Mary Breckinridge

In 1965 Mary Breckinridge died. And in the same year

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[52]W.B. Rogers Beasley and others, "Family Planning by Nurse-Midwives in a Rural Area," reprint from the Journal of Obstetrics and Gynecology of India 18 (June 1968): 2.

[53]Kate Ireland, Interview by Dale Deaton, 1 November 1979, interview 82OH08 FNS151, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

[54] Nancy Dammann, *Social History*, 86.

the FNS accepted substantial public funds for the first time. Helen Browne, who took over as the director of the FNS after Breckinridge's death, thought it just as well that Breckinridge did not live to see the day that FNS accepted government money. But, she felt that this move could no longer be avoided. It seemed inevitable that the FNS would need to receive aid from Medicare and Medicaid to continue operations. No one after Breckinridge had her fund raising ability. Private funds continued to come in, but they did not flow as freely as they had when Breckinridge was in charge.

At the same time that FNS enrolled in the Medicare/Medicaid program, they began planning a family nurse practitioner program for the school, and they started to look into building a much larger hospital in Hyden. The area also experienced many changes as roads and telecommunications improved, the Appalachian Regional Commission got under way, and private and public volunteers descended on the area with a missionary zeal. Johnson's War on Poverty had reached Leslie County in several different forms.

The metamorphosis wrought by the FNS administration's decision to use Medicare funds cannot be overemphasized. Originally, the FNS intended to use the funds to be sure that the elderly and children had medical coverage whether

they lived there or moved out of the area. They wanted to assure the people for whom they cared of continuous and dependable coverage, and since the majority of U.S. hospitals moved toward using these funds, so did the FNS. The decision to participate

> was an agony, a real agony. Medicaid was not such an agony because we were still not charging much for the care of the children, and I think that I felt at that time that this would be some financial income, an increase that we needed. We were beginning to feel the need. Medicare was another matter. There was a survey conducted by local people to go around and talk to the elderly citizens, and a lot of them said 'we've always paid our bills, we're not gonna be beholden to the government'. . . . But because we went into Medicaid we would've been forced into [Medicare] anyway.[55]

Once people enrolled in the program, they wanted to be able to pay for their deliveries in the same way. This greatly changed the way FNS worked because the nurse-midwives could not be reimbursed for deliveries done outside the hospital. The number of hospital deliveries increased at an astounding rate, while in-home deliveries dropped to almost nothing. Very few of the women, "especially if they wanted to pay for the delivery, would stay at home and not pay and not come into the hospital when they could be paid, or the hospital could be paid."[56] These reimbursement problems ultimately

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[55]Helen E. Browne, Interview, FNS Oral History Collection.

[56]Mary Penton, interview, FNS Oral History Collection. In addition, deliveries performed by the FNS would not be reimbursed by Medicare unless a physician was in attendance. Molly Lee, interview, FNS Oral History Collection.

shifted the focus of health care delivery at the FNS from the outpost nursing centers to the hospital.

As a result of the increased use of a small hospital whose capacity had already been taxed before the arrival of Medicare, the FNS began to plan a new hospital. They needed the hospital to meet requirements that the old one did not meet, both because the federal grants and loans specified these requirements and because the local population began to expect more technologically driven medical services. The FNS raised the money through local and national campaign drives for private funds, a grant from the Appalachian Regional Commission, Hill-Burton funds, and a grant from Carnegie Mellon. The construction phase of the hospital took longer than expected because the plans continually failed to meet fire codes. But finally, after much delay, the Mary Breckinridge Memorial Hospital opened its doors in 1975. Medicare as well as the congressionally approved Hill-Burton funds had served to refocus the FNS on the local community hospital as the crucial component in health care delivery.[57]

Many of the longtime staff members of the FNS felt that it lost sight of its original mission when the new hospital opened. No longer distinctive, the FNS began to deliver

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[57]Rosemary Stevens, *In Sickness and In Wealth*, 295.

"medical care like everybody else." The carefully nurtured colonial image of the FNS was shattered when they began to emphasize health care delivered by their new community hospital. And, in so doing, they lost their appeal to many private philanthropies. If these organizations wanted to fund a regular hospital they might as well fund one in their own area.[58] The hospital required something new that the FNS had never really wanted to have around: sick people. The previous goal of the service had been to keep people well through preventive medicine, and to deliver mothers safely at home with well-supervised prenatal care before the delivery. But the new hospital required 70% occupancy and much higher fees to clear the costs of running it.[59] The hike in fees proved problematic for the people using FNS health care services, and prompted one resident to comment that it now took "a person with a really good income or else on welfare, one, to afford any of the hospital services, even the Frontier Nursing Service."[60] Rosemary Stevens concurs with the view that hospitals need sick people:

> Hospitals signify achievements in American science and technology, but they also represent a breakdown in the

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[58]Gertrude Isaacs, interview, FNS Oral History Collection.

[59]Ibid.

[60]Mary Brewer and Clyde Brewer, Interview by Dale Deaton, 10 August 1978, interview 78OH150 FNS10, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky.

> public's health. In their beds lie, inter alia, victims of accidents, violence, poor nutrition, lack of knowledge, carelessness, overindulgence, poverty, and addiction, translated into damaged hearts, babies, lungs, and livers.[61]

Gertrude Isaacs would have agreed wholeheartedly with this assessment of hospitals. Disturbed by what she sensed was a trend toward declining health among the infants delivered by FNS, she did a comparison of the infants delivered before and after the FNS began receiving funds from government programs. What she found suggested to her that Medicare/Medicaid and the domestic policies resulting from the War on Poverty

> have indirectly led to an increase in the number of premature births and in the number of deaths in the first week of life. With more prematures, you have an increase in neurological damage which causes such things as convulsions, cerebral palsy, learning disability, mental retardation, blindness, and hearing problems.[62]

She attributed this change in the health of infants to the fact that a patient must be ill before Medicaid will pay.

The Family Nurse Practitioner(FNP) program began as an indirect result of Browne's decision to accept government funding. One of the goals of the FNS had always been to expand the classes offered to include lectures and

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[61]Rosemary Stevens, *In Sickness and In Wealth*, 356.
[62]Gertrude Isaacs, interview, FNS Oral History Collection.

practicals on rural district nursing. In the concluding chapter of *Wide Neighborhoods*, Breckinridge expressed a desire to start these courses. In the late sixties her plans finally came to fruition in the FNP program. The program came about because the FNS could only receive the Appalachian Regional Commission(ARC) funds for Mary Breckinridge Hospital if it built some kind of training center in conjunction with it. This provided the perfect opportunity to explore the potential of the family nurse practitioner as a health care provider. ARC and the United States Public Health Service provided funding for an initial study to determine feasibility. While on leave from the FNS to earn a Masters of Public Health from Johns Hopkins, Dr. Beasley undertook a study called "The Family Nurse: Guidelines for a Program to Extend Medical Manpower in Appalachia- A Proposal for the Frontier Nursing Service." Beasley found that "most communities of less than 2500 are without physicians and 81% of the population lives in communities of this size."[63] This study convinced him, the FNS, and ARC that all of Appalachia would benefit from a program that trained family nurses. On the basis of the study, ARC agreed to supply funds for the new hospital as

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[63]W.B. Rogers Beasley, "The Family Nurse: Guidelines for a Program to Extend Medical Manpower in Appalachia- A Proposal for the Frontier Nursing Service," Unpublished paper, 1966, 5.

long as the training center for the program was attached and the FNS affiliated the new program with an accredited university. They originally intended to affiliate themselves with the University of Kentucky Medical School in Lexington, but these plans never materialized. Ultimately they made an agreement with the nursing program at Vanderbilt. The program helped to reorient the mission of the outpost centers at a time when birth rates declined precipitously. The centers became preventive rural health centers and lost much of their emphasis on midwifery. Only one of the two nurses stationed at a center needed to be a registered nurse-midwife. The other nurse could be an R.N. or an F.N.P.[64]

While these changes took place within the FNS, Appalachia found itself engaged in a dynamic exchange with the rest of the nation on a larger scale than ever before, and the counties served by FNS were not overlooked. Often the people of Appalachia found themselves less than pleased with the results of improved communication. Throughout the twentieth century books and articles about the region and

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[64]An F.N.P., or Family Nurse Practitioner, is allowed to provide a broader range of medical services than an R.N. or someone who is certified solely as a nurse-midwife. In the late 1960s and through the seventies, the F.N.P. was seen by many to be the answer to rural and inner city shortages in health care providers. Today, the family nurse practitioner's position in the health care industry has largely been usurped by the physician's assistant.

its inhabitants were published for popular consumption. Many of the pieces written portrayed Appalachians as ignorant, dirty, and lazy, or they romanticized them as the last of the original American stock. In this case, the mountaineers were rugged individuals who lived in a premodern world era. In either image the Appalachian people found themselves portrayed as living in a bygone era in the land that time forgot. "By the mid-sixties the prevailing attitude toward Appalachia was that it was America's backyard- a nice place to visit if one went properly prepared."[65] Many did visit either as tourists, reporters or as VISTA volunteers.

The renewed focus on Appalachia in the sixties began with John F. Kennedy's visit to West Virginia during the 1960 presidential primaries. After his visit he formed a National Advisory Committee on Rural Poverty to investigate

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[65]Sharyn McCrumb, "Appalachian Documentaries: Hyping the Myth," *Impact of Institutions in Appalachia*, ed. Jim Lloyd and Anne G. Campbell (Boone, NC: Appalachian Consortium Press, 1985), 69. Other sources for discussions of the image of Appalachia include Alan Batteau, *The Invention of Appalachia* (Tucson: Univ. of Arizona Press, 1990); Rodger Cunningham, *Apples on the Flood: The Southern Mountain Experience* (Knoxville: Univ. of Tennessee Press, 1987); Henry D. Shapiro, *Appalachia on Our Mind: The Southern Mountains and Mountaineers in American Consciousness, 1870-1920* (Chapel Hill: Univ. of North Carolina Press, 1978); and David E. Whisnant, *All That is Native and Fine: The Politics of Culture in an American Region* (Chapel Hill: Univ. of North Carolina Press, 1983).

the economic circumstances of Appalachia and other rural regions. And a few years later President Johnson made a declaration of "War on Poverty."[66] Both of these events generated media interest in Appalachia, and reporters descended upon the FNS area with a vengeance.

In most cases, the local people strongly objected to their portrayal by the media. In his interview for the FNS Oral History Collection, Vance Bowling commented at length about representations of Leslie Countians by both the media and the FNS. Of the media he had this to say:

> Well, I wondered why they didn't take the pictures and so forth of. . . the fine homes. You know, we've got as fine a homes and things in Eastern Kentucky as they have anywhere in the United States. And it made me mad that they would do that instead of use the finer homes. Somebody wants to take a picture, you know, they take a picture of the dirtiest, nastiest, worst house and family in the county, and then they let on like the entire area is like that. . . . I think that's the reason people have a suspicious nature here and I think they deserve to be suspicious.[67]

Some families took advantage of this situation. One Leslie County family dressed in their oldest clothes, piled chicken bones on the table, and persuaded a popular magazine photographer to photograph them. The family received

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[66]Max E. Glenn, ed., *Appalachia in Transition* (St. Louis: The Bethany Press, 1970), 7.

[67]Vance Bowling, Interview by Dale Deaton, 24 May 1979, interview 79OH215 FNS114, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

several boxes of clothing and many checks after the publishing of the pictures.[68] Overall, most people disliked being portrayed as starving, poverty-stricken hillbillies. Carrie M. Parker lamented quite eloquently about this situation:

> I have an uncle who wears bib overalls, who sits on the front porch leaning back in a can chair. He is one of the greatest philosophers I know. He stomped all over Europe in World War II, and if NBC news came through, he would be your typical hillbilly- not interviewed, just photographed. No one would ever ask him what he thought. No one would ever ask him about his philosophy of life, marriage, death, children. And he has terrific ideas, you know, on all of them. So, you get the picture, but you don't know the thoughts from these people. . . . I think I would be happier if you could have a presentation that, okay, show the log cabin, show the mountain. But show that this person is intelligent, sharp, witty, all these things.[69]

People often voiced the same objections to the way the FNS pictured them when trying to raise money.

Mary Breckinridge first brought the area to the attention of people living elsewhere when she made her early fund raising trips, and of course, the worse the plight of the mountain family sounded, the more money she raised. So her speeches emphasized poverty, disease, and lack of resources. Mary Brewer, a resident of Leslie County,

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[68]Nancy Dammann, *Social History*, 113.

[69]Carrie M. Parker, Interview by Dale Deaton, 29 September 1979, interview 80OH43 FNS141, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

objected to this focus. "It was always the little shacks on the hillsides and people going without clothing and half-starved and barefoot."[70] This emphasis created a great deal of tension between the FNS, who needed to raise money, and the community served, who thought they were being treated with condescension. Local people also objected to their collective lack of voice in the direction of the FNS, and to the practice of hiring locals only for menial labor positions. After Mary Breckinridge's death these circumstances shifted, and the people from the area served made inroads into being more fairly represented by and in the FNS.

The reconceptualized Frontier Nursing Service continued to operate through the 1980s, and still functions today. As of 1985, the FNS had graduated over 600 nurses. In the early 1980s they formalized a relationship with the Francis Payne Bolton School of Nursing at Case Western Reserve University in Cleveland so that students could pursue certain credits toward a masters degree at either school.[71] The FNS of the 1980s included birthing rooms in the hospital, family planning, hospice care for the terminally

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[70]Mary Brewer, interview, FNS Oral History Collection.

[71]"FNS- A Story of Frontiers, Nursing, and Service," *Kentucky Hospitals* 2 (Summer, 1985), 10. The FNS' relationship with Case Western Reserve is not maintained today.

ill, plans to build a housing development in Hyden for the elderly and disabled, and five outpost clinics specializing in preventive health care.[72] In 1983 the FNS delivered its 20,000th baby. The Community Based Nurse Education Program began in 1988 and is still operating as of 1994. This program allows students in rural areas to be certified as midwives while living and working in their own communities.[73] Through all these deliveries, the service has maintained an incredibly low maternal mortality rate. Eleven mothers have died in childbirth at the FNS, none of those since 1952.

For all the years of Mary Breckinridge's leadership, the FNS operated solely on private funds. This was made possible through her skills at manipulating her connections to wealthy philanthropists, and through her ability to organize a system of City Committees that brought these socialites together. Her success in getting these Committees to open their pocketbooks and to conduct clothing and food drives rested in her ability to construct a colonial image of Appalachia. She convinced the patrons of the FNS that the people whose health care needs were served

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[72]Ibid., 10. Not all of the services offered by the FNS in the 1980s continue to be offered today. The number of outposts and the range of services provided have decreased.

[73]FNS promotional pamphlet, 1994. FNS Collection, Margaret I. King Library, University of Kentucky, Lexington.

by the organization desperately needed their intervention. In Breckinridge's representations the mountain people were often ignorant and dirty, but she made it clear that they could be educated and made clean. To emphasize this, she not only spoke of the poor and needy, but she also gave testimonials about the people the FNS had turned around. These attitudes toward the local people, that they needed to be mothered and cared for, and that they were in many ways premodern and peculiar contributed to the acceptance of the women of Leslie County as a perfect population upon which the clinical trials of Enovid could be conducted.

CHAPTER TWO
THE COLONIAL EXPERIMENT: CLINICAL TRIALS IN APPALACHIA

In 1958 one hundred women at the Frontier Nursing Service began participation in the clinical trials of the oral contraceptive Enovid (the trade name for norethynodrel). In doing so, they joined a group of Puerto Rican woman who had been subjects in various trials of the same pill since 1953. The Puerto Rican trials have been the subject of many historical accounts in literature on the history of contraception, but the Appalachian trials have remained undiscussed until now.

Searle pharmaceutical corporation provided the pills in cooperation with Gregory Pincus, Min-Cheuh Chang, John Rock, and Celso-Ramon Garcia of the Worcester Foundation for Experimental Biology (WFEB).[1] Pincus and Chang were

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[1]James Reed, *The Birth Control Movement and American Society: From Private Vice to Public Virtue* (Princeton: Princeton Univ. Press, 1978) offers the most complete scholarly account of Searle's development of Enovid. Bernard Asbell, *The Pill: A Biography of the Drug that Changed the World* (New York: Random House, 1995) provides a science journalists less well documented perspective on the history of the pill. Brief accounts of the corresponding development of synthetic hormones by Syntex can be found in Carl Djerrasi, *The Politics of Contraception* (San Francisco: W.H. Freeman and Co., 1979), and in his autobiography *The Pill, Pygmy Chimps, and Degas' Horse* (New York: Basic Books, 1992). Syntex developed synthetic hormones at the same time as the Worcester Foundation for Experimental Biology(WFEB). Creators there were slower to recognize the hormones' value as contraceptive agents until well after WFEB and Searle began testing Enovid. None of these sources mentions the Appalachian trials.

responsible for the development of the Pill. Garcia functioned as the principle investigator in the Puerto Rican trials. And Rock, a Roman-Catholic gynecologist from Boston, served as principle investigator for the FNS trials. Upon their introduction to the testing, the Appalachian women became the first group of Anglo-Americans to be used for the purposes of determining the efficacy and safety of the pill.[2] It is likely that they were chosen partly because of their colonial status: lower socio-economic background, high rate of reproduction, and ability to be easily controlled. This choice raises many interesting questions about the colonial mentalities of the trials' investigators that have yet to be fully explored.

Enovid, in its original formulation, consisted of 9.85 milligrams of norethynodrel, a synthetic progestin, and .15 milligrams of ethynylestradiol-3-methyl ether, a synthetic estrogenic compound first discovered as a contaminant and later included because it helped to reduce incidence of

[2]Two other trials were conducted in the United States, in San Antonio and Los Angeles, but both administered the Pill to immigrant populations of mainly Mexican women. After the Pill became more widely distributed, the cases of Anglo-American users were often incorporated into studies aimed at determining the safety of the Pill, but the women of Appalachian Kentucky were the only group of Anglo-Americans to participate in a controlled clinical trial.

breakthrough bleeding.[3] Dr Philip, director of the U.S. Center for Population Research at the Health, Education, and Welfare Department, explained that the pill functions as a contraceptive in at least six different ways:

> First, by acting on the pituitary gland, the Pill inhibits the production of certain reproductive hormones. Second, it alters the state of the endometrium, which is the mucous coat of the uterus. Third, the progestogens may alter the cervical mucus and thus create a plug to prevent the ascent of the sperm. Forth, the Pill may alter the motility of the Fallopian tubes, again making it more difficult (or perhaps impossible) for sperm to meet egg. Fifth, the Pill, or at least the progestogen factor, may prevent capacitation, which is the ability of the sperm to enter the egg. . . . Sixth, the Pill may have a direct inhibiting effect on the ovary's release of eggs- apart from the effect it exercises through the pituitary hormones.[4]

Of course, this process of action was incompletely understood at the time of the trials. They served, along with animal trials run concurrently, to help investigators further understand the methods by which the Pill inhibited pregnancy.

It is curious that the FNS ever became involved in the trials at all. Many employees of the service attested to

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[3]John Rock, Celso-Ramon Garcia, and Gregory Pincus, "Use of some Progestational 19-Nor Steroids in Gynecology," *American Journal of Obstetrics and Gynecology* 79 (April 1960), 759 and Annette B. Ramirez de Arellano and Conrad Seipp, *Colonialism, Catholicism, and Contraception: A History of Birth Control in Puerto Rico* (Chapel Hill: Univ. of North Carolina Press, 1983), 115.

[4]cited in Barbara Seaman, "The New Pill Scare" *MS.* 3 (June 1975), 100.

Mrs. Breckinridge's dislike of contraception or family planning. She found it unnecessary unless the mother would be placed at risk by having a child. Before the Pill, the FNS offered diaphragms, sponges, condoms and jellies to women who had at least five children, and tubal ligations to women who had born at least eight live children.[5] Breckinridge set the rules about family size, and even then she objected to the use of contraceptives under most circumstances. In her interview, Helen Browne confirmed that Breckinridge totally opposed tubal ligations unless they were medically necessary. Given this, it seems odd that she would agree to allow Searle and the Worcester Foundation to use the FNS in their trials. The explanation lies in her personal relationship with John Rock.

Mary Breckinridge had known Rock well for a number of years. She worked with his wife, Nan, after World War I with CARD in France. When she returned to the States and later started the FNS, the Rock's supported the organization with donations of money and time. Mrs. Rock served on the

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[5]Early methods of contraception at FNS are discussed in the interviews with Helen E. Browne and Gertrude Isaacs, FNS Oral History Collection; W.B. Rogers Beasley and Henry W. Murray, "Successful Family Planning in a Nurse-Midwifery Program Alters Nurse-Midwifery," unpublished manuscript [photocopy], FNS Papers, Special Collections, Margaret I. King Library, Univ. of Kentucky, Lexington, 3; and in John H. Kooser, "Rural Obstetrics," *The Southern Medical Journal* 35 (February 1942), 127.

Boston City Committee, as did her daughters after they grew older. And Dr. Rock was a member of the National Medical Council for years. Breckinridge stayed with the Rocks when she made fund raising trips to Boston.[6]

The correspondence files of the FNS collection contain several personal letters written by Breckinridge to both Mrs. and Dr. Rock. The pair visited the FNS in April 1957, and during this trip Rock offered to include the Nurse-Midwifery program in his trials with oral contraceptives.[7] Breckinridge did not immediately agree to participate. In a letter posted February 8, 1958, Nan Rock wrote to Mary Breckinridge, "John asked me to write you and say that should you be interested in using some of the material for a field study in your F.N.S.-- particularly from the birth control angle [--] he could get you plenty of material from the drug houses and many from various sources would be delighted to set it up for you."[8] The reason Breckinridge eventually agreed to participate is not clear, but it seems

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[6]John Rock, Interview by Dale Deaton, 15 June 1979, interview 80OH31 FNS129, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

[7]W.B. Rogers Beasley, "After Office Hours: Coping with Family Planning in a Rural Area" *Obstetrics and Gynecology* 41 (January 1973), 156 and "Visitors" *Frontier Nursing Service Quarterly Bulletin* 33 (Spring 1958), 43.

[8]Nan Rock, Boston, to Mary Breckinridge, Wendover, 8 February 1958, typed letter, FNS Collection, Special Collections, Margaret I. King Library, Univ. of Kentucky, Lexington.

to have been based solely on her personal and long-standing friendship with the Rocks. Dale Deaton asked in his interview with Helen Browne, "but did she see the contradiction between [opposing] family planning and permitting Dr. Rock to come in and do his research?" To which Browne simply replied, "she was very fond of Dr. Rock."[9] Rock, known for his charm, had once inspired Margaret Sanger to remark, "being a good R.C.[Roman Catholic] and as handsome as a god, he can just get away with anything."[10] So it seems that friendship and charisma were responsible for introducing oral contraceptives to the FNS.

Many different people, both at FNS and at the Worcester Foundation for Experimental Biology, had reasons to be interested in holding a portion of the clinical trials in Appalachia. Dr. W.B. Rogers Beasley, Medical Director at FNS wanted the service to become heavily involved in promoting family planning in the area. He also thought that the FNS could be an important test case for the effectiveness of oral contraceptives. In many underdeveloped and colonized areas of the world which had

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[9]Helen E. Browne, Interview, FNS Oral History Collection.

[10]James Reed, "Doctors, Birth Control, and Social Values," Judith Walzer Leavitt, ed., *Women and Health in America* (Madison: Univ. of Wisconsin Press, 1984), 134.

high birth rates the physician to population ratio was extremely low. These same areas often had more nurses and nurse-midwives attending to their health care needs. Beasley thought that the FNS could be used to show that the pill and its side effects could be effectively managed in rural populations by a staff made up mostly of graduate nurse-midwives.[11]

Pincus and Rock had other reasons for finding the FNS attractive. After one of their visits to Puerto Rico to check the progress of trials being conducted there, Rock suggested the FNS as a possible new location for testing the pill. In 1957, the Puerto Rican trials were not going as well as the investigators had hoped. Many women experienced side effects, the drop out rate was high, and the women lived in a large area that was not easily controlled. The FNS already maintained the health of a large population of fertile women with whom they had a close and trusted relationship. Rock said of his contact with the FNS:

> Oh I think that we were looking for an experimental group that was organized enough so that we could control it and there would be a clinic. We did it in Puerto Rico too, you see- with the birth control clinic down there. So I suppose I suggested it to Pincus. . . . We went to Puerto Rico together and then I suppose I suggested that the Frontier Nursing Service would be good.[12]

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[11]Beasley, "Family Planning by Nurse-Midwives in a Rural Area," 2.

[12]John Rock, Interview, FNS Oral History Collection.

Too Many of the Wrong Kind: Fears of a Population Explosion

The trials in both Puerto Rico and Appalachia were preceded by many years of growing concern about the "population problem" both in the U.S. and abroad. Beginning after World War I, middle and upper class Americans increasingly expressed fear that the right type of people were not reproducing themselves, while the wrong type seemed to be multiplying at an unprecedented rate.[13] This appeared to be the central worry of the article by T.S. Hyland that *Life* published in 1949. The article is odd because it is difficult to tell whether Hyland is ridiculing the middle and upper classes for reproducing so slowly, the mountaineers for reproducing too rapidly, or both. In the subtitle of the article he referred to the baby boom in Leslie County as "a biological joyride to hell." And yet, in much of the article he wrote as though he approved of the mountaineers' rate of procreation especially when compared to the rate of "that most barren of all mammals, the female college graduate." He went on to say:

> For the last two generations or so some groups have bred so poorly as to incur the suspicion that they viewed their own extermination as a public good. These poor breeders include the business and professional classes, college graduates, skilled workmen of all

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[13]Discussion of these concerns can be found in Carole R. McCann, *Birth Control Politics in the United States, 1916-1945* (New York: Cornell Univ. Press, 1994) and in Reed "Doctors," and *The Birth Control Movement*.

> sorts- in general, the prosperous, successful, ambitious half of society.[14]

Ultimately, he predicted that this state of affairs would lead to "a sort of gradual, bloodless revolution of the proletariat, in which, more and more, the sort of people found in Leslie County inherit America."[15] The piece issued a call for the right kind of people to take an interest in procreation. Hyland clearly wanted what he saw as the better half of society to get with it and start making babies. "The Fruitful Mountaineers" is a wonderful article for capturing the apprehensions that existed in the minds of many of those at whom it was aimed.[16]

Another telling change in the attitude of urban, middle class Americans toward population is in the membership lists of the Population Association. In the late 1940s and through the 1950s many previous members of the Maternal and Child Health Association, which concerned itself with quality of life for mothers and children, but not necessarily with the numbers of children, either switched

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[14]Hyland, "Fruitful Mountaineers," 62.

[15]Ibid., 63.

[16]The article outraged the citizens of Leslie County and the staff at FNS. A response to it, entitled "Pack of Lies About Us and Our Way of Living," appeared in *The Hazard Herald* Sunday, 1 January 1950, 5-6. Breckinridge was very angry about the piece and publicly denied having given any support to the writer while he was in the area.

their membership to the Population Association or became involved in both organizations.[17] The Population Association, and a growing number of media representatives, addressed the problems of rapid reproduction both in the rural U.S. and in developing countries.

Middle-class worries about the exploding immigrant and third world populations persisted for decades. They fueled contraceptive research by encouraging philanthropists and government agencies to funnel large sums of money into firms such as WFEB and Syntex. Clearly, for the good of comfortable, middle class white people everywhere, it was up to scientists to create a simple, effective method for controlling the birth rate of the poor, semi-literate, mostly colored people who made up the lower classes. Commenting on this situation in his book, *The Time Has Come: A Catholic Doctor's Proposals to end the Battle over Birth Control,* John Rock wrote that "the greatest menace to world peace and decent standards of life today is not atomic energy but sexual energy."[18] These anxieties influenced the selection of a certain type of woman for the clinical trials of Enovid.

The path which led to the Pill started in March, 1951 when Margaret Sanger and Dr. Abraham Stone, of the Margaret

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[17]Ramirez de Arellano and Seipp, *Colonialism*, 94.
[18](London: Longmans, Green and Co., LTD), 18.

Sanger Research Bureau in New York, met with Pincus to determine whether or not the newly synthesized steroids his lab worked with had potential as contraceptive agents.[19] Pincus responded favorably to the inquiry, and Margaret Sanger helped him secure funding for further research from Planned Parenthood and from the personal fortune of Katherine Dexter McCormick. Within two years the team at the Worcester Foundation began testing the efficacy of progesterone-like steroids in inhibiting pregnancy in animals, and after a brief period of testing only with animals, they decided that they needed human subjects. Pincus located Dr. Rock with the help of the Planned Parenthood Federation. Together, they approached him for help in locating possible participants.[20]

Dr. Rock had been testing the steroids for their effects in helping women with fertility problems to conceive. He had some minor success with this avenue of investigation, and he did not hesitate to team up with Chang and Pincus. They first tested Enovid as a contraceptive among a group of mental patients at a facility close to Worcester. The results of this trial proved nothing since none of the mental patients were having sexual

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[19]Ramirez de Arellano and Seipp, *Colonialism*, 105.
[20]Ibid., 107.

intercourse.[21] McCormick and Sanger carefully monitored the progress of testing at Worcester. They grew ever more impatient as time went on, and in a letter to Sanger, written in 1954, McCormick asked: "How can we get a 'cage' of ovulating females to experiment with?"[22] She did not have long to wait.

The Early Trials: Puerto Rico and Haiti

In February of 1954 Pincus visited Puerto Rico to lecture to a medical association. While there, he toured medical clinics in the area to determine whether or not they would be suitable for conducting clinical trials of Enovid.[23] Pincus and Rock soon agreed that they "should attempt in Puerto Rico certain experiments which would be difficult in this country."[24] They feared encountering problems in this country due to the Comstock Act. The act, passed in 1873, made it illegal to give contraceptive advice under any circumstances, and the subject was completely omitted from a number of textbooks published after 1873. But in 1936 Augustus Hand, a federal appeals court judge, ruled that "while the language of the Comstock Act was

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[21]Paul Vaughan, *The Pill on Trial* (New York: Coward-McCann, Inc., 1970), 37.
[22]cited in Reed, *The Birth Control Movement*, 358.
[23]Ramirez de Arellano and Seipp, *Colonialism*, 108.
[24]Ibid.

uncompromising with regard to contraceptive devices and information, if Congress had had available in 1873 the clinical data on the dangers of pregnancy and the safety of contraceptive practices that were available in 1936, birth control would not have been classified as obscenity."[25] Given this ruling, Pincus and Rock would have been fairly safe from being prosecuted under the Comstock Act. People with money and connections could get around the restrictions imposed by Comstock.[26] The ethical and legal dilemmas of a clinical trial with terrible results would have been much more difficult to deal with in the United States than in Puerto Rico. Trials conducted in the U.S. would have run up against vocal religious and moral opposition. And the specter of potential legal action taken on the part of harmed participants was much more real in the U.S. than in Puerto Rico. This is a more plausible explanation for the location of the trials than fear of the Comstock Act.

The Puerto Rican and Haitian trials quickly ran into difficulties. The first trial used injectable steroids rather than pills, and the investigators had a hard time keeping subjects enrolled in the experiment. After that trial Pincus, Rock, and Chang switched to pills and had

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[25]Reed, "Doctors," 132.
[26]Vaughan, *The Pill on Trial*, 41.

better luck.[27] But the dropout rate remained substantially high, and many more participants complained of side effects such as nausea, weight gain, gastralgia, headache, dysmenorrhea, breakthrough bleeding, and dizziness. Out of 730 women studied, a full 65% complained of at least one of these side effects.[28]

Pincus and Panigua, the principle investigator stationed in Puerto Rico, set up a trial that was ethically questionable even at that time. They wanted to use this trial to determine the source of the side effects in the trials already conducted. They suspected that this high incidence of undesirable reactions was psychological in origin, and they attributed the effects to the "emotional super-activity of Puerto Rican women."[29] To test this hypothesis they gave 13 new users Enovid with the usual warnings about side effects. This group reported side

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[27]Four different groups were involved in the trials with the 10mg formulation of Enovid. Three of the groups were located in Puerto Rico, one in Haiti. Several journals published articles detailing the results of the trials. See Gregory Pincus et al., "Effects of Certain 19-Nor Steroids on Reproductive Processes and Fertility," *Federation Proceedings* 18 (December 1959), 1051-1056; Gregory Pincus et al., "Effectiveness of an Oral Contraceptive," *Science* 130 (10 July 1959), 81-83; John Rock et al., "Synthetic Progestins in the Normal Human Menstrual Cycle," *Recent Progress in Hormone Research* 13 (1957), 323-346; and John Rock et al., "Use of Some Progestational 19-Nor Steroids in Gynecology," *American Journal of Obstetrics and Gynecology* 79 (April 1960), 758-767.

[28]Ramirez de Arellano and Seipp, *Colonialism*, 120.

[29]Ibid., 10.

effects in 23% of their early cycles. A second group of 28 women was given a placebo and was warned of side effects. This group of women did not know they were taking a placebo, and they were not told to use another form of contraception for the duration of this trial. Seventeen per cent of this group reported experiencing side effects while taking the placebo. And a third group of 15 was given Enovid with no warnings of possible side effects. This group experienced side effects in slightly more than 6% of their early cycles.[30] The number of pregnancies which may have occurred in the women unknowingly taking the placebo was not listed. The results of this trial led the investigators to assume that the vast majority of reported side effects were psychological in nature.

The trial discussed above occurred just before the trials at the FNS began. Rock intended to measure the occurrence of side effects among the women participating in

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[30]Information about this trial can be found in Ramirez de Arellano and Seipp, *Colonialism*; Reed, "Doctors," and *The Birth Control Movement*; Vaughan, *The Pill on Trial;* Pincus et al., "Effectiveness of an Oral Contraceptive" and "Effects of Certain 19-Nor Steroids on Reproductive Processes and Fertility." In a discussion appended to this last article, Dr. Robert B. Greenblatt noted that libido was also not affected by Enovid. He said this was because "libido in the female is not a positive force but is best expressed in 'passive acquiescence.'" Since libido was determined by the 'active' male, the Pill, happily, could not dampen his ardor. This seems like an antiquated view of female sexuality. I do not know if the majority of physicians in the 1950s shared these ideas.

the FNS trial. He wanted similar figures to compare with those from Puerto Rico. By comparing the experiences of the Appalachian women with those of the Puerto Rican women the investigators could determine whether the effects were real or the result of the Puerto Rican women's "emotional super-activity." In the case of the Puerto Rican trials they ultimately concluded that Enovid constituted a safe and effective method of contraception. The investigators found that the "record of faithful tablet-taking in rather busy women of low economic status seems to us to be a good one."[31]

'A Cage of Ovulating Females:' Clinical Trials at the Frontier Nursing Service

In the mid 1950s, around the time of Rock's 1957 visit, the Frontier Nursing Service reported delivering over 500 babies a year. This was the highest reported birth rate in the United States, and it made the FNS an attractive location for clinical trials.[32] Dr. Rock offered Dr. Beasley and the nurse-midwives a limited number of cycles of Enovid. He provided enough medication for one hundred women to be in the trial at a given time, and he allowed three years as the length of the initial trial. Rock, Searle, and

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[31]Pincus et al., "Effects of Certain 19-Nor Steroids," 1054.

[32]Beasley, "After Office Hours," 156.

the Worcester Foundation for Experimental Biology wanted to find out whether the Appalachian women would faithfully take the pills, how they felt about them, and to what extent side effects occurred among this population. They were also interested in testing the effectiveness of 5mg and 2.5mg dosages of Enovid, along with the original 10mg formulation. The FNS, on the other hand, wanted to determine the efficacy of the Pill in preventing pregnancy, whether the women were motivated enough to take it regularly, what role the nurse-midwife could play in keeping women interested in the Pill, and how effective the nurse-midwife could be in selecting potential Pill candidates.[33] And finally, the women participating in the trials wanted to know that they had found a reliable way to control the number and spacing of their children.

The available medical records of the women who took Enovid show that many of them felt positive about the Pill. One patient's records contained the note "has no worry after starting pills because of fear of pregnancy, has complete confidence in Enovid."[34] But many of the men did not feel

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[33]Ibid.

[34]Birth Control Records, Uncataloged Collection, Special Collections, Margaret I. King Library, Univ. of Kentucky, Lexington. These records are curious in that no names of the medical personnel involved are written on any of them. Information given in the oral history interviews suggests that Dr. Beasley supervised the initial trials and then gave most of the responsibility for the women in the

the same way. Molly Lee, one of the nurse-midwives who worked closely with the trials, said that contraception was a taboo subject. It was

> really quite difficult to speak about. . . anything to do with family planning. . . . Some husbands were quite threatening if the subject came up. They would get really annoyed and of course, as you know, guns are very easily used in this country. There were times when I really thought Dr. Beasley might be at risk. . . . He always had a great capacity for talking with people. And if he know that somebody was offended, he would get to the husband and discuss it with him. And you know, later on he did do sterilizations. Especially when people had large families and were at medical risk for having more children.[35]

Despite these difficulties in dealing with the men's objections to family planning, and despite the fact that some Catholic nurse-midwives left in protest, the clinical trials went smoothly.[36] At least, the trials proceeded through a great number of years. Medical records show that one woman took the pill for 109 cycles (or 9 years, 1 month). During this time the woman developed chronic cystic cervicitis.[37] A total of 7 women, out of the 58 records from which I obtained information, took the Pill for 55 cycles or

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trials to Anna Mae January. Molly Lee is also mentioned frequently as someone who participated in running the trials.

[35]Molly Lee, Interview, FNS Oral History Collection.

[36]Helen E. Browne, Interview, FNS Oral History Collection. Browne does not say how many of the Catholic nurses left because of their dissatisfaction with the FNS' growing interest in family planning.

[37]Birth Control Records, Uncataloged collection, FNS Collection, Univ. of Kentucky.

more.

The woman who took the Pill for nine years proved to be the anomaly. More women dropped out after a few cycles, or stayed on Enovid for a much shorter length of time. Twenty-two women quit using the Pill before they reached their tenth cycle. Among the records of 58 women there were 4 cases of breakthrough bleeding, 6 cases of spotting, 7 cases of nausea, 2 cases of dysmenorrhea, and 5 cases of abnormal pap smears.[38] These numbers represent 41% of the 58 cases discussed. The FNS figures indicate that many of the Appalachian women experienced side effects, thus destroying Pincus' hypothesis that the side effects were a result of using a population of Puerto Rican women suffering from an "emotional super-activity" inherent in their genetic make-up. Clearly, the side effects did not go away when the trials came to FNS. Nine women listed unwanted side

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[38]Ibid. The difference between spotting and breakthrough bleeding is really a matter of the amount of blood involved. Spotting is just what the name implies, a few spots of blood. Breakthrough bleeding, on the other hand, more closely resembles the normal amount of blood discharged during normal menstruation. The medical records used for this discussion of the women's experiences in the Enovid trials are incomplete. In a study conducted by Beasley and Murray in 1970 they note that most of the original data on the patients involved in the preliminary studies done with Rock (1958-1960) were not available for their study. The records are most likely at Searle or in the Worcester Foundation's records. I plan to locate the rest of these files and pursue the topic further in my dissertation.

effects as their reason for leaving the program. One twenty-six year old woman with five children discontinued her prescription after only one month because she vomited for 36 hours.[39] Another stopped during the first cycle because of excessive bleeding, and a woman who took the Pill for 72 cycles died of a coronary infarction during the seventy-second cycle. She would have been approximately 30 years old at the time she died, and her records did not include any mention of heart problems or an unusual health condition. In other studies, conducted in the mid-sixties, long term use of the Pill was tentatively listed as a possible cause of heart attacks and was more strongly associated with the development of thrombo-embolitic conditions.[40] There was no indication in this woman's records that the FNS linked her death to pill use or even looked into the possibility.

Two of the women participating in the trials withdrew because they feared long term ill effects from the Pill. Neither indicated that they had experienced adverse short

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[39]Ibid.

[40]A.S. Parkes, "Biology of Human Fertility and its Control," in *Public Health and Population Change* ed. Mindel C. Sheps and Jeanne Clare Ridley (Pittsburgh: Univ. of Pittsburgh Press, 1964), 423. For a discussion of the questionable use of statistics in determining the safety of oral contraceptives see Deborah G. Mayo, "Increasing Public Participation in controversies Involving Hazards: The Value of Metastatistical Rules," *Science, Technology, and Human Values* 10 (Fall 1985): 55-68.

term effects, but both women read articles which advised against use of the Pill. The case of one of the women revealed the ambivalence with which some regarded the Pill. She stopped taking it after 11 cycles because she read an article that linked Pill usage to cancer. But after only one month away from the Pill, she resumed because she did not want any more children. On the twenty-third cycle she stopped once again, and decided to switch to the rhythm method. Clearly it was difficult for this 32 year old mother of five to decide whether her concern for her health, or her desire to have no more children was more important. In the other instance, a 19 year old mother of three began taking the pill in December, 1959. She stopped in November of 1965 because she "read an article, she told her district nurse, which made her feel it wasn't safe to take Enovid too long."[41] In May, 1966 she was fitted for an IUD.

Eighteen women left the trials for reasons other than side effects. In order to participate, a woman had to agree to keep a detailed calendar every month recording side-effects, feelings about Enovid, and accuracy in taking pills. She also had to agree to come to Hyden each month to pick up Enovid from the outpatient clinic. After the first three years, this procedure changed, and nurse-midwives

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[41]Birth Control Records, Uncataloged Collection, FNS Collection, Univ. of Kentucky.

could offer oral contraceptives while making home visits, but initially this was not allowed because the FNS had to make sure the women participating were responsible and intelligent enough to follow the directions for taking the Pill. So women dropped out because of the inconvenience of keeping the calendars and going to Hyden for pills. And finally, Dr. Beasley, along with Anna Mae January and Molly Lee, the nurse-midwives working closely with the project, reserved the right to remove anyone they chose from the program. They generally did this when they judged a woman to be too incompetent to participate in the trials. The remarks on these cases said "this patient has kept very poor records- unless her records improve we will stop her pills," "patient was taken off Enovid by Dr. Beasley because she wasn't following instructions-she didn't keep a calendar," "can't keep her records without supervision," or "patient illiterate-lost calendar and became confused."[42]

Dr. Rock went to FNS a couple of times to check the progress of the trials. He said of Mary Breckinridge and the people of Leslie County:

> She was a very broad minded and sociable lady. and she did quite a job down there just to start the thing- with the kind of people that were there. The very nice, intelligent people [the mountaineers] had no idea of- or very little idea of - social progress or

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[42]Ibid.

developing themselves and so forth. . . .[43]

Regardless of Dr. Rock's opinion of the mountaineers, I am sure his assessment of their level of development had much to do his decision to approve the Appalachian women as suitable for clinical trials. He and the people at FNS deemed the trials a success. Given this, I have to wonder why their results were not published in the same articles that reported the results of the Puerto Rican and Haitian trials.[44] There is still no clear explanation for their failure to report these trials. For Dr. Beasley, the trials demonstrated that "patients with a close district relationship with a graduate nurse-midwife have a significantly more prolonged use of oral contraception than those who live further away and are seen occasionally and then by the doctor."[45]

'Browbeating the Government:' FDA Approval of Enovid

The FDA agreed with the Worcester Foundation, Searle, and FNS about the success of the clinical trials of Enovid, and in 1960 the 10mg formulation of Enovid gained approval

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[43]John Rock, Interview, FNS Oral History Collection.

[44]see note 27 of Chapter Two for specific information on the Puerto Rican and Haitian trials.

[45]Beasley et al., "Family Planning by Nurse-Midwives," 3.

for use as a long term, cyclic contraceptive by reproductively healthy women. The FDA authorization was based on data collected in Puerto Rico and at FNS. Other accounts of the trials claim that only the Puerto Rican and Haitian trial data was used to gain approval, but no other author has known about the FNS trials. John Rock, in his interview with Dale Deaton, confirmed that the FNS records were sent first to Worcester and then on to Searle. He said that "it was after the Frontier Nursing Service records, results, together with the results of my own clinic that [we] could convince Searle that it was worth marketing. And that's when we went down there and browbeat the group [FDA] into approving it."[46] John Rock and two Searle officials, tired of waiting for the FDA to move on Enovid, flew to Washington D.C. to speed up the process.

> The fellow who had charge of it was a thirty-year old practitioner or something in Washington. And he came in the office, and he had all the material- a great stack of stuff on his desk- and he hadn't even looked at it. So we talked about it and he said he would go through it as soon as he could. And I can remember I took off my jacket, stood up. . . and I went over to the desk. [I said,] 'You have no time. You'll do it now.' And he said, 'oh, all right.' And so he signed the whatdoyoucallit, and that was it. That made a great impression on the Searle people, that I browbeat the government into taking the final step. But we knew it was all right. I mean, I was convinced. My conscience was clear about that.[47]

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[46]John Rock, Interview, FNS Oral History Collection.
[47]Ibid.

According to Annette Ramirez de Arellano and Barbara Seaman, the FDA based its judgements about the efficacy and safety of Enovid on the cases of only 132 women who had taken the pill consecutively for twelve months or more.[48] A recent account, that of Bernard Asbell, said that correspondence in the Gregory Pincus papers showed that the FDA based its decision on the cases of 897 women, representing 801.6 woman-years, and 10,427 cycles.[49] But if the account given by Rock is accurate, then the man who approved Enovid did not read the material sent to him by Searle and the FDA based its judgements on nothing.

Searle began marketing its 10mg formulation of Enovid immediately after receiving the green light from the FDA. The Pill was a phenomenal success. It quickly surpassed all other forms of birth control in number of users. Doctors who tried to continue to do research on other types of contraception found it difficult to get their patients to cooperate. Hundreds of women suddenly developed "the hurting diaphragm syndrome," where before it had worked perfectly. The only thing that would cure the syndrome was a switch to the pill. "The eagerness with which physicians embraced this new wonder of modern science reflected their common assumption with the lay public that many of life's

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[48]Ibid.
[49]Asbell, *The Pill*, 304.

most personal problems could be solved with a technological fix."[50]

The Pill's moment of unquestioned glory lasted only a couple of years. By 1963, at the request of concerned consumer and women's health groups, the Senate Committee on Government Operations subcommittee, headed by Hubert Humphrey, investigated the FDA. This was the point at which it became clear that the FDA had approved Enovid based only on the 132 clinical studies mentioned earlier in this chapter.[51] This displeased a growing number of physicians and women concerned about the widespread incidence of numerous side effects among Pill users. The FDA came under fire for their decision to allow an inadequately tested drug to be disseminated so widely, and at the same time, critics began to question Searle and the Worcester Foundation's decision to use a poor population of Puerto Rican woman for their suspect clinical trials.

The clinical trials of birth control pills conducted by both Worcester Foundation and Syntex outraged a number of

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[50]Reed, "Doctors," 134.

[51]Seaman, "Pill Scare," 63. Seaman was one of the earliest and most outspoken critics of the safety of the Pill. Her main assessment of the situation concerning the Pill, cited on p. 62 of this same article, was that the Pill was essentially "a grand and unprecedented biological experiment, the outcome of which does not directly affect the grown men who developed and prescribe it, but does effect many millions of women and their unborn babies."

medical ethicists. These trials, together with others in which patients were misinformed, not informed or otherwise exploited led to the creation of guidelines governing human experimentation. The guidelines, not in existence at the time of the Enovid trials, were then retroactively used against the principal investigators in the trials by reporters and historians alike. Many were specifically outraged by the trial in which women were given a placebo instead of Enovid, and were then not told to use another form of contraception. This was the trial in which Pincus tried to determine whether the side effects of Enovid were psychological in origin. Of course, in the case of this particular trial, the ethically questionable nature of the experiment would be evident even without guidelines for human experimentation.

One of the earliest, now famous, articles to address the ethical concerns of post World War II human experimentation in U.S. medical research, Henry K. Beecher's "Ethics and Clinical Research" came out in the June 16, 1966 volume of the *New England Journal of Medicine.* He called for responsible investigators to make every possible effort to ensure that they received the informed consent of all clinical trial participants. He also stressed that "an experiment is ethical or not at its inception; it does not

become ethical post hoc- ends do not justify means."[52] Before this article, no call had been made for uniform guidelines concerning human experimentation. At the end of the second World War, the atrocities committed by German doctors in the experiments with people detained in concentration camps were denounced by the international community of physicians and scientists. The Nuremberg Military Tribunal issued the Nuremberg Code which contained ten clauses outlining proper procedure in human experimentation. The clause concerning informed consent said that a potential subject

> should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, over-reaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision.[53]

But in America this code was never considered to represent a legal precedent. In 1946, the American Medical Association adopted the following guidelines concerning experiments and drug trials which used human subjects:

1. The voluntary consent of the person on whom the experiment is to be performed must be obtained.
2. The danger of each experiment must have been investigated previously by means of animal

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[52]Henry K. Beecher, "Ethics and Clinical Research," *New England Journal of Medicine* 274 (16 June 1966), 1360.

[53]H.M. Pappworth, *Human Guinea Pigs* (Boston: Beacon Press, 1967), 188.

experimentation.
3. The experiment must be performed under proper medical protection and management.[54]

These guidelines left a great deal of leeway for the physician or researcher to decide when he or she had met the requirements. It was not until the late sixties and early seventies, when books detailing ethical breeches in human experimentation began to be published, that the guidelines became much more stringent.

In a 1970 collection of essays on the ethics of human experimentation, Francis D. Moore called the widespread use of oral contraceptives "one of the largest mass human experiments," and he went on to say:

> Their effects after prolonged administration are entirely unknown. There is virtually no animal work reporting the continuous administration of these drugs for more than three years, and their impact- either on the psyche, ovaries, endometrium, or breast- on women after twenty years of continuous administration remains entirely unknown. . . . Oral contraception has certain features that set it apart from ordinary therapeutic innovation because it is a medicinal treatment given to a healthy person to prevent a normal occurrence, rather than an inoculation given to prevent fatal epidemic disease or a drug (or operation) employed to treat human illness.[55]

These concerns about the development and testing of the Pill, and about its long and short term consequences for

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[54]Ibid., 189.

[55]Francis D. Moore, "Ethical Boundaries in Initial Clinical Trials," in *Experimentation with Human Subjects*, ed. Paul A. Freund, (New York: George Braziller, 1970), 363.

users, dampened but did not extinguish the excitement of millions of women. The Pill remained the most popular form of birth control in spite of the bad press it received. Sales dropped by 20% in the seventies, but began to rise again in the early eighties.[56] At FNS, only two of the women for which I had medical records discontinued usage of the Pill because they read an article warning against prolonged usage of Enovid.[57]

New Directions at FNS: The Family Planning Program

The clinical trials of Enovid marked the beginning of a major reorientation of the mission of FNS. Family planning became a central feature of the service, and all women receiving prenatal care also received contraceptive counselling. The women approached about family planning were enthusiastic. Gertrude Isaacs, co-developer of the FNS' Family Nurse Practitioner program said the local women were "excited about it because they really didn't want to have more children. . . . They were very tired."[58] And according to Dr. Mary Wiss and Dr. Pauline Fox, who were Medical Director and Assistant Medical director for a time,

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[56]Asbell, *The Pill*, 308.

[57]Birth Control Records, Uncataloged collection, FNS Collection, Univ. of Kentucky.

[58]Gertrude Isaacs, Interview, FNS Oral History Collection.

some women wanted to take the Pill, but their husbands opposed it. The women got around this by telling their husbands that their birth control pills were vitamins.[59]

The change in fertility rate in Leslie County after the introduction of family planning gave clear indication of the women's receptivity toward contraception. Between 1960 and 1970 the annual number of births decreased by 30%.[60] In fact, the birth rate slowed to such an extent that the FNS had to go outside their area to find enough deliveries to train the nurses attending the graduate school of midwifery. Some student nurse-midwives had to go as far away as Cincinnati so that they could attend enough deliveries to receive certification. This situation led Martha Lady, a midwife who once worked at FNS, to remark in her interview with Dale Deaton, "I wish they could get a place where they could get more deliveries down there. I'm sorry Dr. Rock came along with his pills, but it's kind of important too."[61] By 1969 a full 27% of FNS midwifery visits were devoted to family planning rather than deliveries.[62]

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[59]Dr Mary Wiss and Dr. Pauline Fox, interview, FNS Oral History Collection.

[60]Beasley, "After Office Hours," 156.

[61]Martha Lady, Interview by Dale Deaton, 4 August 1978, interview 78OH148 FNS08, transcript, FNS Oral History collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

[62]Beasley and Murray, "Successful Family Planning," 10, and Molly Lee, Interview, FNS Oral History Collection.

After 1964 family planning meant much more than just the Enovid trials which were limited to a maximum of 100 participating women at any given time. In that year, Searle stopped providing the Pill at no cost, the Mountain Maternal Health League made IUDs available at a low cost, and the Frontier Graduate School of Midwifery began to include lectures on family planning.[63] Throughout all of these changes, the FNS found it difficult to secure the funding that would allow them to offer cheap contraception. The Minutes of the Executive Committee for April 10, 1965 reported: "We are now getting financial assistance from the Population Council and some two hundred women are on one sort of family planning program or another. In this way, we are controlling almost a third of the possible pregnancies."[64]

The reorientation toward family planning, along with the public funds made available through the Appalachian Regional Commission and Medicare/Medicaid, changed the functioning of the FNS dramatically. The total number of deliveries dropped quickly in the period 1958-1970, and the number of those deliveries being performed in the hospital

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[63]Beasley and Murray, Ibid., 5 and Beasley, "After Office Hours," 156.

[64]Minutes of Executive Committee, 10 April 1965, FNS Collection, Special Collections, Margaret I. King Library, Univ. of Kentucky, Lexington.

continued to rise. The birth rate in Leslie County in 1960 was 41, by 1970 it had declined to 23, and Dr. Beasley projected that it would reach 16 by 1972. He found that the initiation of family planning services had "not only begun a change in the population structure of the community, it also had made extensive changes in the practice and training program for nurse-midwives."[65] As it became more and more difficult to provide the training necessary to certify a large number of nurse-midwives, the Graduate School of Nurse-Midwifery needed to expand its offerings if it was to survive.

The introduction of the Family Nurse Practitioner(FNP) program solved many of the difficulties presented by the changing birth rates in the FNS area. The family nurse practitioner could be certified to practice without taking any of the midwifery courses, or the nurse-midwives sphere of activity could be broadened with the additional training available through the new program. The training in this program focused more on preventive health care for the entire family, rather than making the mother and infant the primary recipients of health care through which the nurse-midwife kept track of the health of the rest of the family. The program also made extensive training in family planning

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[65]Beasley and Murray, "Successful Family Planning," 1.

a central requirement for receiving FNP certification. This made the FNS attractive to international agencies concerned about the birth rate in underdeveloped countries, and the Medical Director and administration of FNS made an effort to pitch their program as a place where nurses could gain the knowledge they needed to effectively control the birth rate of isolated rural populations all over the world.

The clinical trials of Enovid inaugurated a time of great change at the FNS. Within ten years of their initiation, Breckinridge died leaving Browne and Beasley to collaborate on administrative and medical decisions. Both chose to take the Service in a direction that focused on family planning and reducing the birth rate, and local women proved to be enthusiastic about their plans. Because they realized that their ability to train nurse-midwives to introduce birth control into rural areas made them attractive to international population and development agencies, the administration of the FNS began to manipulate the colonial image of the area they served. It was during these years that a new construction, which capitalized on direct comparisons with Third World populations began to emerge. This colonial construction was all the more easily sold to the general public and to potential funders because it was also propagated by the national media and by the reports of Johnson's poverty warriors. Much remains to be

learned about the clinical trials which took place in Appalachia, but what is known about them now provides the basis for discussion of colonial models, constructions, and mentalities.

CHAPTER THREE
COLONIAL MODELS AND COLONIAL MENTALITIES: BRINGING MEDICINE TO THE MOUNTAINS

The FNS accepted unproblematically the thesis of Appalachian otherness which held that Appalachia represented a "strange land and a peculiar people."[1] Ella Woodyard's forward to the 1930 edition of the FNS' Record Routine admonished the nurses to keep careful records for several reasons, including the fact that the

> Appalachian mountains constitute the largest reservoir of certain important racial stocks to be found in the United States. . . . The Service is in a position to secure and preserve with little effort beyond carefully writing down the facts, data which in a few years will be worth literally hundreds of thousands of dollars.[2]

This view of Appalachia originated in the local-color movement in literature of the late 19th Century. It initiated the idea that Appalachia symbolized a region distinctly and curiously different from the rest of America.

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[1]This idea of the strangeness of Appalachia is developed extensively in Henry D. Shapiro, *Appalachia on Our Mind: The Southern Mountains and Mountaineers in the American Consciousness, 1870-1920* (Chapel Hill: Univ. of North Carolina Press, 1978) and in David E. Whisnant, *Modernizing the Mountaineer: People, Power, and Planning in Appalachia* (Knoxville: Univ. of Tennessee Press, Revised Edition, 1994).

[2]*Record Routine for the use of the Frontier Nursing Service, Inc.* Compiled by the Committee on Records, Forward by Dr. Ella Woodyard (June, 1930). FNS Collection, Special Collections, Margaret I. King Library, Univ. of Kentucky, Lexington, 2.

This notion of strangeness, which made Appalachia appealing and exotic to readers, also made it seem a perfect place for missionary activity beginning in the 1880s.[3] Many philanthropies began doing their 'good works' in Appalachia. Wealthy, white, women from urban areas in the north, or from Lexington and Louisville, established missions of many types in this period. They assumed that they brought religion to a people who had been heathens, education to the ignorant and illiterate, and in the case of the FNS, medical care to those who formerly had none.[4] The mission of the FNS fit squarely with that of other "uplift" enterprises established between the 1880s and the 1920s as "state and federal agencies, private foundations, and such other groups as the Red Cross sent 'mountain workers' to organize clinics, literacy programs, and agricultural improvement projects" throughout the region.[5] Parallel to the development of "uplift" enterprises, coal, oil and timber companies from the Northern U.S. established numerous extractive industries in Appalachia. They set up company towns, employed local labor at low wages, and siphoned resources and profit from the area without replacing them.

Many works have addressed the problems created by both

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[3]Shapiro, *Appalachia on Our Mind*, xiii.
[4]Ibid.
[5]Whisnant, *Modernizing*, 3.

the missionary and industrial endeavors, and in the 1970s the growing area of Appalachian Studies introduced an Internal Colonial Model to explain what had been happening in Appalachia since the 19th Century.[6] In the late 1960s and through the 1970s, historians who studied science and empire also developed a colonial model of a different sort to explain the spread of western science and medicine.[7] Both models, with some reformulation, offer one, limited way to begin exploring the practices of the founder and employees of the Frontier Nursing Service.

Two Colonial Models

The Appalachian Studies colonial model, explicitly set out in 1978, "examines the process through which dominant outside industrial interests establish control, exploit the region, and maintain their domination and subjugation of the

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[6]See especially, Helen Matthews Lewis, Linda Johnson, and Donald Askins ed., *Colonialism in Modern America: The Appalachian Case* (Boone, NC: The Appalachian consortium Press, 1978). Earlier authors, cited in this source, began work on the Colonial Model, but this book pulled together a collection of essays dealing with different case studies using the model, and it is widely cited as the definitive work on the Internal Colonial Model.

[7]The earliest expression of this particular colonial model can be found in George Basalla, "The Spread of Western Science" *Science* 156 (5 May 1967), 611-622. This model continues to be used as a basis for the work of many scholars today.

region."[8] The model was developed as an alternative to the Culture of Poverty Model and the Underdevelopment Model. The Culture of Poverty Model assumed that the regional problems of Appalachia existed because of the deficiencies of Appalachians and their culture, and the Underdevelopment Model argued that the primitive infrastructure of Appalachia was to blame for regional inadequacies. The Internal Colonialism Model, taking a different approach, focused on the colonial domination of Appalachia by outside interests. It demonstrated "the concerted efforts of the exploiters to label their work 'progress' and to blame any of the obvious problems it [the colonization] caused on the ignorance or deficiencies of the Appalachian people."[9] The model consisted of four phases. First, colonization began with a forced, involuntary entry by the colonizer. After the colonizers entry, the values, orientation, and way of life of the colonized are rapidly modified by the colonizer's values, which are assumed to be superior. Third, the colonized group is administered by members of the dominant group. And forth, "there exists a condition of racism, a principle of social domination by which a group, seen as inferior or different in terms of alleged biological

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[8]Helen M. Lewis, "Introduction: The Colony of Appalachia," in *Colonialism in Modern America*, ed. Lewis, Johnson, and Askins, 2.

[9]Ibid.

characteristics, is exploited, controlled, and oppressed socially and psychically by a superordinate group."[10] This model influenced a great many scholars in Appalachian Studies, and with some important revisions it is useful for developing a clearer understanding of the way in which FNS operated.

The Science and Empire Colonial Model was initially used to explain the spread of science from Western Europe to the rest of the world. It emphasized the movement of knowledge and practices from the center to the periphery. This model consisted of three phases. In phase one, a European visits the area that will be colonized to study the local features (e.g.- flora, fauna, or in the case of anthropology the culture of the population) and takes the information back to Europe. During the second phase, the newly colonized area develops colonial science. The science is considered colonial because it is necessarily inferior to European science, and it is totally "dependent upon an external scientific culture and not yet a fully participating member of that culture."[11] Colonial science in phase two does not allow for the creation of independent scientific institutions, but it does allow a few scientists

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[10]Helen M. Lewis and Edward M. Knipe, "The Colonialism Model: the Appalachian Case," in Lewis et al, ed., *Colonialism in Modern America*, 16.

[11]Basalla, "Western Science," 613.

from the colonized area to challenge the work of European scientists with their own research. In the transition between phases two and three, colonial science still looks for external support from Europe, but the colonized area begins to create its own "institutions and traditions which will eventually provide the basis for an independent scientific culture."[22] And in phase three, the colonized area struggles to create a fully independent scientific tradition.

If the emphasis of the Science and Empire Colonial Model remained that of the spread of European science to the rest of the world, then the model would not be terribly helpful in looking at the FNS. Although I would like to point out that Breckinridge did base the structure of the FNS on two health care models deployed in Europe: the Scottish Highlands and Islands Medical Service and the American Committee for Devastated France. She also patterned the FNS Graduate School of Nurse-Midwifery, in terms of courses and certification requirements, after the British method of training nurse-midwives. But if a few changes are made to the model it becomes a much more useful explanatory device. Many historians working in this area have already made a number of the changes needed, and the

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[22]Ibid., 617.

changes end up being significant enough to make me question whether they are really still working with the same model.

Criticisms and Improvements

At least five changes must be made to either or both the Appalachian Studies Colonial Model and the Science and Empire Colonial Model. First, in their original formulation the models view the colonized area as powerless and totally dominated either by an oppressor or by Western science. This is unhelpful because the user of the model is forced to engage in victimizing rhetoric. Seeing the colonized as powerless takes away their agency and ignores significant forms of power that they could and did employ.[13] To say that the mountaineers had the power to employ strategies of resistance is not to deny that they were exploited and dominated both by outside interests and by Appalachians who hoped to advance according to an outside scale of rewards. Rather, an understanding of the forms of power used by Appalachians must be examined to lend complexity and perhaps ambiguity to a story that is otherwise one sided and much less interesting.

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[13]Stephen L. Fisher, ed., *Fighting Back in Appalachia: Traditions of Resistance and Change* (Philadelphia: Temple Univ. Press, 1993), 1. This collection of essays gives numerous examples of the different forms of power employed by Appalachians when fighting exploitation and misrepresentation by outsiders or by other Appalachians.

For instance, in the case of the Frontier Nursing Service, the clinical trials of Enovid could be viewed solely as exploitation of a group of Appalachian women by Searle Pharmaceutical Company and the Worcester Foundation for Experimental Biology. Clearly, Searle and Worcester had much to gain in using an isolated, highly reproductive population to test their pill. And the fact that the women were Appalachian probably made it easier to justify using them as an experimental population. But, to look at the trials from only this point of view is to ignore the agency exercised by the women who participated in the trials. The medical records of these women clearly show that they wanted an effective way to regulate the number and spacing of their children. And the majority of the available records indicated that the women felt very positive about the Pill's effectiveness.[14] In many cases they were willing to endure the short term side effects of Enovid if it meant that they could control their rate of reproduction. The tremendous expansion of all FNS family planning services after the

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[14]One issue about the clinical trials that cannot be resolved at this point concerns the informed consent of the trial participants. To this point, I have not been able to locate documents which explain the specific procedures used in the trials. I do not know what the women who participated were told about the Pill, the experimental nature of the trials, or the possibilities of harmful side-effects. I hope to find the documentation which will allow me to address these issues in a dissertation.

trials concluded offered further evidence that the women in the area were actively choosing a variety of birth control methods. I think the lyrics to a 1973 Loretta Lynn song called "The Pill" summed up the attitude of many of these women quite well:

> For several years I've stayed at home
> While you had all the fun,
> And every year that came by another baby come.
> There's gonna be some changes made
> Right here on nursery hill
> You've set this chicken your last time 'cause now I've got the Pill.[15]

Second, with special reference to Basalla's model, I certainly do not doubt (as Basalla did) that social factors influence the production of legitimized knowledge at the margin or the center.[16] This also applies to the FNS to the extent that they truly believed that they were in Leslie and the surrounding counties to provide medical care but not

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[15]cited in Asbell, *The Pill*, 170.

[16]I think it is important, in offering this criticism of Basalla, to note the date of his initial article (1967). He recognized the importance of locality, even if he failed to see that local social factors can influence the knowledge content of science. It is perhaps unfair to criticize him unduly for this, given that I have access to an entire body of STS literature dealing with just this subject. This literature did not exist at the time Basalla wrote "The Spread of Western Science." David Wade Chambers, "Locality and Science: Myths of Centre and Periphery," A. Lafuente, A. Elena, and M.L. Ortega, ed., *Mundializacion de la ciencia y cultura nacional* (Madrid: Ediciones Doce Calles, 1993), 605-618. Chambers discusses the failure of Basalla's model to account for "diverse local scientific traditions" or for the notion that "diverse localities might give rise to alternative forms of scientific organization and practice."

social change. The FNS and the area it served were- and are- in dynamic interaction with each other, and this interaction influenced the form that health care services took which in turn created societal changes, and so on. For example, the initial structuring of the FNS as a central administrative post and hospitals with outpost nursing centers resulted directly from the settlement patterns of the area. And, in terms of specific medical practice, some nurse-midwives of the FNS collected and used the herbal remedies known to local people long before the FNS came to Kentucky.[47] The FNS, in turn, introduced local women to a whole new way of thinking and speaking about pregnancy, labor, and delivery. The entire process still remained much more natural (a loaded term in and of itself) than it was in deliveries performed by obstetricians. But the FNS introduced a new concern for prenatal care and a different vocabulary in reference to labor and delivery. Instead of speaking of 'punishing hard' and 'kotching babies,' the women and their husbands began to speak of having 'labor pains' or 'contractions' and of having their babies

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[47]The FNS collected pictures and uses of herbs in "Yarb Lore in the Kentucky Mountains," reprint from Frontier Nursing Service Quarterly Bulletin (Summer 1946), 3-19, and in unpublished lists of herbal remedies for various medical problems, no author listed, folders 13-18 of box 327, FNS Collection, Special Collections, Margaret I. King Library, Univ. of Kentucky, Lexington.

'delivered' by the nurse-midwives.

The third change which must be made applies to both models. As initially conceived, each model maintains a strict dichotomy between internal and external, center and periphery, colonizer and colonized. I would suggest that the boundaries between each of these sets of terms are much more fluid than they were originally thought to be. And, along these same lines, maintaining rigid categorization of these terms often results in a privileging of the internal, the center, or the colonizer. For example, in Basalla's initial formulation of the Science and Empire Colonial Model, the Scientific Revolution (via Copernicus, Kepler, and Newton), is accepted unproblematically.

> Social modernization of Europe is fundamentally a result of Europe's internal qualities, not of interaction with the societies of Africa, Asia, and America after 1492. . . . Therefore: colonialism must mean, for the Africans, Asians, and Americans, not spoilation and cultural destruction but rather, the receipt-by-diffusion of European civilization: modernization.[18]

In the literature of Science and Empire scholars, David Wade Chambers has launched an important critique of scholars who maintain these strict boundaries, and who treat the center as unproblematic.[19] Chambers thought that Basalla's model

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[18]J.M. Blaut, *The Colonizer's Model of the World* (New York: Guilford Press, 1993), 2.

[19]David Wade Chambers, "Period and Process in Colonial and National Science," in *Scientific Colonialism: A Cross-Cultural Comparison*, ed. Nathan Reingold and Marc Rothenberg

had continued to be used for so long after its publication because it made the valuable argument that scholars who focused on the international nature of scientific inquiry had forgotten to consider that science exists in a local setting. But, even though Basalla recognized the "importance of studying local conditions, he provided us with a model that is almost entirely inattentive to local variation."[20] The solution proposed by Chambers is a modified model which focuses on localities instead of centers and peripheries.

The localities version of the Science and Empire colonial model allows for a more complex analysis of the case study to be discussed. It no longer focuses on the rise of scientific institutions in a national context. While providing space for the development of national scientific traditions, it also recognizes that local diversity in the creation of scientific knowledge can take place in localities much smaller than nations, localities such as Appalachian Kentucky, for instance. And, it removes the linear, progressive emphasis that other scholars had placed on Basalla's three phases. Chambers redefines the

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(Washington D.C.: Smithsonian Institution Press, 1987), 297-321; and David Wade Chambers, "Locality and Science: Myths of Centre and Periphery," in *Mundializacion de la ciencia y cultura nacional*, ed A. Lafuente et al. (Madrid: Ediciones Doce Calles, 1993), 605-618.

[20]Chambers, "Myths," 608.

phases "so as to see them not as chronological periods or stages- unidirectional, sequential, and cadenced- as they have previously been understood, but rather as on-going and dynamic processes-interactive, concurrent, and open-ended."[21] Basalla would agree with this looser interpretation, and in fact he recently pointed out that he "explicitly called [the early] model a *heuristic device*, and said that its phases were not *cosmically* or *metaphysically* necessary."[22]

The fifth, and final, critique to be offered focuses on the Appalachian Studies Internal Colonialism Model. The model features the introduction of outside interests who exploit Appalachia for its resources without returning any of the profit gained from the resources to the area from which they were taken. The second phase of the model mentions the rapid change that occurs in Appalachian culture and values as a result of the exploiter's presence in the region. The problem lies in an assumption that underpins these phases. That assumption rests on the notion that Appalachia, before the coming of the industrialists and missionaries, was a closed and isolated society.

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[21]Ibid., 607.

[22]George Basalla, "The Spread of Western Science Revisited," in *Mundializacion de la ciencia y cultura nacional*, ed. A. Lafuente et al.(Madrid: Ediciones Doce Calles, 1993), 600.

> According to this view, it was not until the penetration of industrial capitalism, roughly in the 1880s, that Appalachia was transformed from a bucolic, static society into modern, mobile, and uprooted communities plagued by family dislocation and community breakdown. Political and economic communities once self-sufficient and stable were impoverished; and mountaineers lost their independence, even became powerless. The region was reduced to the status of a colony of corporate America.[23]

Mary Beth Pudup critiqued this point of view by showing that their needs to be a more refined understanding of the history of preindustrial Appalachia. She called this history "a *terra incognita* surrounded by dense thickets of 'invented tradition.'"[24] By accepting this view of preindustrial Appalachia, some proponents of the Colonial Model adopted many of the stereotypes of Appalachians that the local-color writers made so popular at the turn of the century, and assimilated the notion that there existed a single, homogenous subculture that was Appalachia before the capitalists arrived.[25] Breckinridge's colonial construction

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[23]Crandall A. Shifflett, *Coal Towns: Life, Work, and Culture in Company Towns of Southern Appalachia, 1880-1960* (Knoxville: Univ. of Tennessee Press, 1991), 11.

[24]Mary Beth Pudup, "Beyond the 'Traditional Mountain Subculture': A New Look At Pre-Industrial Appalachia," in *Impact of Institutions in Appalachia*, ed. Jim Lloyd and Anne G. Campbell (Boone, NC: Appalachian Consortium Press, 1985), 114.

[25]Ibid., 122. Not all of the people who created and expanded the Appalachian Studies Colonial Model were guilty of perpetuating the early stereotypes of Appalachians. For many of the scholars and activists who embraced it, the model provided a way to empowerment and a better understanding of the ways in which they were being exploited.

of the FNS also perpetuated these stereotypes. Pudup, in trying to find a corrective for this situation, called for a new class analysis of preindustrial Appalachia that recognized the heterogeneity of the region.

This essential failure to recognize local variation at some level of analysis plagues both forms of colonial models under discussion. And while each offers an important starting point from which to look at the history of interactions between different localities, neither can provide the space to consider the ambivalence that arises when localities interact with each other. In the case of the Science and Empire model, there is not enough recognition of the contributions of non-Western scientific traditions, and of the rise of new forms of legitimized scientific knowledge that result from local variations in thinking and practice. And the Appalachian Studies model does not allow for the development of complex relationships between Appalachians, and the people like Mary Breckinridge, who moved into the area to bring medicine to the mountains, but leave the mountain people unchanged. Scholars in both fields have recognized this, and many of their works have been cited throughout this thesis. Roy MacLeod noted that no model has been introduced that can supersede Basalla's model, but he went on to note that "the search for such a model is itself outdated. The realities of the world seem

to resist simplified explanation. . . . The more we learn about the processes by which knowledge is diffused across cultural frontiers, the more problematic those processes become."[26] And in Appalachian Studies, David Whisnant called for a new level of Appalachian historical analysis that has "more tolerance for ambiguity, paradox, and contradiction."[27] In the end, I would have to agree that a more nuanced understanding than either colonial model can give is needed in any attempt to explain the relationship between FNS and the people it served, and the relationship of FNS in its local context to localities outside the mountains. The models constrain the story of the FNS in a way that is dissatisfying. This is not to say that they do not tell the whole story accurately, because I do not believe that there is just one story to be told. But I am arguing that neither model leaves room for historical contingencies or accidents. Nor do they allow for sufficient recognition of the force of individual personalities and ambitions in shaping a particular history. For example, neither model could adequately account for the

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[26]Roy MacLeod, "The Worldwide Diffusion of Science," in *Mundializacion de la ciencia y cultura nacional*, ed. A. Lafuente et al., (Madrid: Ediciones Doce Calles, 1993), 736.

[27]David E. Whisnant, "Second-Level Appalachian History: Another Look at Some Fotched-On Women," *Appalachian Journal* 9 (1982), 117.

fact that the FNS came to take part in the clinical trials of Enovid because Mary Breckinridge and John Rock were old friends. It certainly helped that the FNS served an isolated population with a high fertility rate and low level of education, but Rock did not set out to find a group of Appalachian women for his trials. He only realized the possibilities for including the FNS in the trials while visiting Wendover with his wife. Had he not already had a friend in a perfect situation to help him out, it is unlikely that any portion of the trials would ever have been conducted in Appalachia.

Living the Image: Colonial Mentalities and Colonial Constructions

To argue that the colonial models fall short in the ways noted above, is not to deny the existence of a colonial mentality among many of the people who went to Appalachia to start uplift enterprises of one sort or another, nor is it to deny the economic colonization of Appalachia by northeastern industrial interests. Nor is it to dismiss the notion, in the case of Breckinridge, of colonialism as a deliberate construct intended to increase the power and money garnered by FNS' founder. Clearly models and mentalities are not the same thing. Breckinridge and many of the nurse-midwives came to FNS with a well-defined

mission. They were going to make life better for the mountaineers, and by better they meant that they were going to introduce the world of modern, or mostly modern, medicine into a backwards and isolated culture.[28] Considering this colonial mentality and the maternalistic ways in which the FNS viewed the local people offers a path to a better understanding of the relationship of the FNS with the people it served.

Before Breckinridge ever went to Kentucky to do her primary investigation she entertained specific notions about what she would find. In chapter one, I offered an extensive review of the contents of her 1923 investigation of the state of midwifery in the Kentucky mountains. This investigation clearly revealed the preexistence of Breckinridge's colonial mentality. She found what she had expected to find. Primitive medical conditions and a great need for an organization such as the Frontier Nursing Service. And she chose to ignore the existence of doctors and a pharmacy because they might weaken her case. To make the FNS more appealing to potential funding agencies, Breckinridge also needed to show that the area suffered from

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[28]The intentions of the FNS in this regard were very similar to those of the women who started settlement schools. With specific reference to Hindman Settlement School and the mission of Katherine Pettit and May Stone see Whisnant, *All That is Native and Fine.*

high rates of maternal and infant mortality. She could not find the proof she needed to make a strong case for high mortality rates, so she assumed they existed. This assumption rested on the notion that Appalachian lay and granny midwives could not provide the kind of medicine and legitimized medical knowledge that Breckinridge could bring to them. Breckinridge was convinced that women and children needed her organization to come and save them from horrible deaths. She had already accepted the traditional view of Appalachia as a premodern subculture in need of enlightenment and progressive social reform. It might well be true that the FNS reduced maternal and infant mortality rates, but the information available to Breckinridge cannot tell us whether this was the case.

Once the FNS was in place, Breckinridge deliberately set up an autocratic system over which she maintained total control. Through her speeches, with accompanying photographs, slides, or sometimes a movie, she perpetuated the image of the mountaineer as poverty stricken, but proud, and ignorant, but educable. She made what Chandra Mohanty refers to as 'the colonialist move.' This move involved the deliberate construction of the colonial or Third World subject "through discourse in ways that allow the exercise

of power over it."[29] In Breckinridge's portrayal of the mountain people, as in development literature focusing on

> the Third World, there existed a veritable underdeveloped subjectivity endowed with features such as powerlessness, passivity, poverty, and ignorance, usually dark and lacking in historical agency, as if waiting for the Western hand to help subjects along, and not infrequently hungry, illiterate, needy, and oppressed by its own stubbornness, lack of initiative, and traditions.[30]

This particular image of the mountaineers garnered more donations from the wealthy members of the city committees, and it increased their sense that the people served by the FNS desperately needed their services and support. It also fostered a local dependency on the FNS in times of strain. The image allowed the FNS to collect and distribute food, clothing, and money for emergencies that had not been available before their establishment.

The FNS was able to increase their power in the area in at least two other ways. Once they had proven to be effective in caring for pregnant mothers and their families, they garnered more power by establishing themselves as the only competent health care providers in the area and by offering their services at low cost. And as Paul Starr pointed out, power at the most personal level begins with

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[29]Arturo Escobar, *Encountering Development: The Making and Unmaking of the Third World* (New Jersey: Princeton Univ. Press, 1995), 9.

[30]Ibid., 8.

dependency, "and the power of the [health] professions primarily originates in dependence upon their knowledge and competence."[31]

The third way in which the FNS gained power in the area was as an employer of local people. Although Breckinridge did not hire locals for any jobs which carried much responsibility, she did hire them as menial laborers: livestock handlers, cooks, blacksmiths, and house keepers. She was very deliberate in choosing people for these jobs. And sometimes she angered the people she chose not to employ. In 1936 a local woman blew up one of the FNS out buildings because she objected to their hiring practices and thought they showed too much favoritism toward certain people in the area. Breckinridge, in explaining the reason for the incident, wrote to T. Kenneth Boyd, one of the FNS' wealthy patrons:

> You see, the situation in here is that I control a great deal of power. I don't mean in reference to medical nursing, or social services which are available for all alike, but as regards funds given out for work. With a large drifting population, formerly employed in the mines, and more than can be carried by W.P.A., there is an immense demand for money to support life. I try to see that the work we give out reaches those who need it most. On the other hand, our regular jobs cannot be given out on the basis of need, but on the basis of character, ability and fidelity. The regular employees of the Frontier Nursing Service are almost the only people in this county with an assured income. The floating population haven't even any land, and

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[31]Starr, *Social Transformation*, 4.

> desperately need money, or the work to bring money. They are not in the main as reliable a group as the old mountaineers, who never left the land. Many of them are jealous of the fact that we give employment to the old group who need it less, but who are so much more reliable.[32]

It is clear from this letter that Breckinridge deliberately employed people who were more likely to stay in the area, and thus more likely to need the services of her nurse-midwives. The employment practices of the FNS often engendered animosity among local people. As did their practice of excluding locals from making important decisions about the direction in which the FNS would go. Grace Reeder, a Leslie Countian, stated that the "local people did not have responsible jobs in the FNS."[33]

For many years, locals were not even hired as secretaries at FNS. Breckinridge stressed that all women brought into the area to work for FNS were to maintain a professional relationship with the people who already lived there. The women were not to associate too closely with local men, and it was an unwritten rule that you did not date them. Lucille Knechtly, an FNS employee, said of this situation, "I never could quite decide whether Mrs. Breckinridge thought we might contaminate the mountain boys

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[32]letter cited in Dammann, *Social History*, 57.

[33]Grace Reeder, Interview by Carol Crowe-Carraco, 25 January 1979, interview 79OH144 FNS51, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

or the mountain boys would contaminate us."[34] In an effort to maintain a professional image, and to distinguish employees of the FNS from the local people, Breckinridge required that everyone wear uniforms. The couriers wore tan, the secretaries brown, and the nurses blue. Everyone except the nurses at the outpost center lived at Wendover. Employees of the FNS did not live off FNS land or quit wearing uniforms for all hours on duty until after the death of Breckinridge. After 1965, the rules concerning relationships with locals slowly relaxed, and local people began to have a larger voice in the direction that the FNS would go. Before that time, the local committees for each center really had no say in any aspect of running the center except its general maintenance. Mrs. Breckinridge gave a report of how things stood at the FNS, but locals did not have input.[35] Alden Gay, a Leslie County resident concurred:

> In those days, the committees were more of a supportive group that were concerned with the personal welfare of their nurse and the everyday running of the center. But not anything having to do with finances, or with budgets, or with cost accounting. There was no management. They had no real power to do anything.

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[34]Lucille Knechtly, Interview by Dale Deaton, 9 July 1979, interview 82OH18 FNS161, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

[35]Molly Lee, Interview, FNS Oral History Collection.

They were friends and that was it.[36]

Alberta Kelly, another local resident, said that "what Mary Breckinridge wanted happened, thank you. The mountain people just said 'lovely' and accepted it very happily."[37]

In the mid-sixties, the local residents began to express their discontent with this situation, and the FNS received a tremendous amount of criticism for excluding them from the running of the organization. As a result, the local committees played an increasing role in deciding how to handle FNS finances, and what the FNS would offer in the way of medical and health services. But the FNS remained very much a matriarchal organization, and many employees continued to think of the mountain people as children, just as Breckinridge had. In fact, some FNS people likened the growing complaints of the local people to the tantrums thrown by children who have had their way for too long. Dr. Mary Wiss saw the criticisms as justified. She said the FNS had been "'big mama' for too long, taking care [of the people] and answering their questions, and the people were becoming far more sophisticated, many with college

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[36]Alden Gay, Interview by Linda Green, 1 September 1978, interview 79OH17 FNS18, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

[37]Alberta Kelly, Interview by Dale Deaton, 26 April 1979, interview 79OH187 FNS86, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

educations and what have you. And they still would not give a job to local people- if they're local people, they're sort of your babies type of thing."[38]

For all of the years that Breckinridge headed the Frontier Nursing Service, she viewed the local people as children who needed her to care for them, and many of the nurse-midwives shared this view. In this respect, the Frontier Nursing Service was a very maternal institution, and Breckinridge was the grand matriarch. Many of the people who worked at FNS verified its maternal nature in their interviews. Agnes Lewis spoke of the relationship between Breckinridge and the local residents. She said that Breckinridge was "much more understanding of the mountain people. . . . She was very, very patient with the most difficult people on the district and with children. But her own contemporaries, her staff, were the ones who had it the hardest."[39] It is interesting that Lewis referred to the staff as Breckinridge's contemporaries, but she did not include adult mountain people as equal to the staff. This separation of the staff from the locals further distanced the FNS from the people it served, and it allowed them to

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[38]Mary Wiss, Interview by Dale Deaton, 14 February 1979, interview 82OH04 FNS147, transcript, FNS Oral History Collection, Margaret I. King Library, Univ. of Kentucky, Lexington.

[39]Agnes Lewis, Interview, FNS Oral History Collection.

justify excluding locals from important decisions. If the mountain people were child-like, then they were to be raised and protected, not treated as equals. And, much as parents might lie to their children for their own good, the nurse-midwives sometimes lied to their patients. Beth Burchenal Jones, a courier during her college years, said that women in labor often did not want anything for their pain. "They didn't want any medication- not even aspirin. And that presented a problem for the nurses because there were times they wanted to slow the labor down. And they had to tell 'em it was vitamins or something like that."[40]

Through the 1950s and especially after Breckinridge's death, local people were less timid about expressing their criticisms of the FNS. Many of them objected to the way FNS had depicted them in order to get funding and they further objected to the media portrayals of Appalachia that proliferated as the War On Poverty heated up. Around this time, the colonial construction maintained by some employees at FNS began to shift. In the larger media, and at the FNS, more direct comparisons began to be made between Appalachia and the Third World. Earlier representations of Appalachians had focused on the poverty of the region, and

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[40]Beth Burchenal Jones, Interview by Marion Barrett, no date, interview 82OH39 FNS182, transcript, FNS Oral History Collection, Margaret I. King Library, University of Kentucky, Lexington.

on the peculiar character of the people, but not on comparisons with other areas that were seen as underdeveloped. With the rising concerns about international population pressures and exploding fertility rates in the Third World, Appalachia came to be seen as another such region that happened to be located in the center of a country that was supposed to represent the epitome of the developed world. In the sixties and seventies, Peace Corp volunteers were sent to the FNS area as a prerequisite before going overseas. This was done to prepare them for the conditions they would face in underdeveloped countries.[41]

The FNS capitalized on this new image and used it to secure funds and personnel from the Population Council and the United States Agency for International Development. They advertised themselves as a place where nurses from underdeveloped areas could learn the techniques needed to control fertility. Dr. Beasley vigorously promoted this new twist in the FNS' image. He published several articles showing that nurses who could effectively control fertility at the FNS could also take these skills with them to India, Guatemala, or Puerto Rico.[42] He also worked to ensure that

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[41]Alden Gay, Interview, FNS Oral History Collection.

[42]See Beasley, "After Office Hours" or "The Nurse-Midwife as Mediator of Contraception."

the midwives trained at the FNS had reciprocity with the Central Midwives Board of England. In 1972 FNS midwives had full reciprocity which was activated for anyone wishing to work in England "and for other FNS graduated nurse-midwives who worked in the former colonial areas where British standards of midwifery were maintained."[43]

Disappearing Frontiers: The Image Crumbles

As the FNS moved toward the opening of Mary Breckinridge Hospital, the emphasis on the area as remote, isolated, or underdeveloped diminished. The building of the hospital signalled a major turning point in the mission of the FNS. As I discussed in Chapter Two, the FNS began to offer standard medical care which focused on tending the sick rather than keeping them healthy in the first place. And the area served by FNS had changed by that time as well. Highways and improved communications raised the local people's expectations for the type of health care they should receive. Nancy Dammann, in her interview for the Oral History Collection, attributed this change in expectations to the television: "I think watching the TV, "Emergency," and those hospital soap operas made people aware that, you know, they weren't getting everything in

[43]Beasley and Murray, "Successful Family Planning," 2.

medical services that people in New York were."[44] It is possible that television had some effect on the demands of people for more sophisticated medical care, but it seems more likely that, as transportation networks improved, the FNS had to compete with larger hospitals in Hazard and Lexington. Whatever the explanation, it is clear that a great deal had changed in the FNS area by the late seventies. Kenneth Warren, a colleague of Dr. Beasley's who had visited the FNS over the years, remarked in 1979:

> Well, the roads, the houses are in better shape. They're painted. . . . You see some really affluent-looking houses here. I mean, it just isn't what it used to be. And apparently it's changing very rapidly. And I think it's gonna have immense effects on the Frontier Nursing Service. I think the FNS has to maintain its base here, but look for new frontiers.[45]

By the 1970s the FNS could no longer claim to be working at the "frontier," but the image had served them well in prior years. From Breckinridge's initial 1923 survey "Midwifery in the Kentucky Mountains: An Investigation," and through all the years of her life, her construction of the FNS and of the people it cared for served her well. In fact, it was a brilliant strategy as far as funding was concerned. By playing up the isolated

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[44]Nancy Dammann, Interview, FNS Oral History Collection.

[45]Kenneth Warren, Interview by Dale Deaton, 16 August 1979, interview 80OH41 FNS139, transcript, FNS Oral History Collection, Margaret I. King Library, University of Kentucky, Lexington.

desperate rural mother, Breckinridge made a strong case for the need of her intervention, and she convinced the wealthy socialites of major U.S. cities that they should open their pocketbooks to help these families. She told them: "The object of what we are doing is to get light. . . . We of the Kentucky Committee have hitched our wagons on the stars, believing that 'whatever doth make manifest is light.'"[46]

Breckinridge's colonial construction also functioned well in attracting nurses, administrators, and the debutante couriers to work at the FNS. They were drawn by a sense of adventure and freedom, and for many, by a need to satisfy their idealism and missionary zeal through helping the poor mountain people. Over and over again the interviews with FNS nurse-midwives emphasized these themes. Mary Deaton went to FNS because she "always liked the country, and loved horses, and loved people- not necessarily rich so to speak. Plus, I was very idealistic and wanted to cure the world."[47] And before Gertrude Isaacs arrived at FNS, while she was still in nursing school, "when they said, 'What are you going to do after you graduate?' I said, 'I'm going to the mountains to take care of the hillbillies.'"[48] The image of

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[46]Mary Breckinridge, "The Nurse Midwife: A Pioneer," in *The American Midwife Debate*, ed. Judy Barrett Litoff (New York: Greenwood Press, 1986), 237.

[47]Mary Deaton, Interview, FNS Oral History Collection.

[48]Gertrude Isaacs, Interview, FNS Oral History Collection.

the FNS, of the nurse on horseback, clearly triggered the missionary impulse, the desire to bring improved medical care to Appalachia, in many people over the years. Breckinridge, and her colleagues at the FNS successfully construct an exotic and appealing other who required the help of her service and of benevolent urban philanthropists.

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