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# Nurses, Patients, Physicians, and Science: Changing Nursing Ideals in the United States, 1924-1955

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## Abstract

White nurses employed by the Bureau of Indian Affairs (BIA) between 1924 and 1955 were particularly attracted to scientific methods of nursing practice and medical research. The rising emphasis on science in early twentieth-century America shaped the ways that nurses carried out procedures and responded to demanding jobs. Science, however, also represented excitement, a journey into a new world, and an opportunity to challenge old ideas about nurses' place on the medical ladder. As new women, they were less likely to accept male physicians' notions of superiority, and they demonstrated this by pushing the boundaries between nursing practice and physicians' practice. Primary documents left by new nurses indicate that these women recognized such activities were essential to the wellbeing of their Native American patients on reservations from Montana to Arizona. Science, then, functioned as a major force in new nurses' lives as they shaped its concepts to mold an even newer image of womanhood and recast "nursehood."



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Janet Green and Estelle Peterson were just two of the hundreds of white nurses who worked with Native Americans on reservations throughout the American West between 1924 and 1955. Employed by the Bureau of Indian Affairs (BIA), nurses worked in hospitals and as public health nurses who were known as “field nurses.” In personal accounts of their experiences as BIA nurses, both Green and Peterson discussed the parts they played in medical research that was conducted at Fort Apache, Arizona, over a five-year period during the 1930s.<sup>1</sup>

The high incidence of trachoma, a serious eye disease that frequently resulted in blindness among Native Americans, was a major concern. Trachoma, commonly referred to as sore eyes or conjunctivitis, caused granular lesions to develop on the interior eyelid, and without treatment, corneal abrasions and scarring occurred. The unfortunate outcome was impaired vision or blindness. Trachoma was highly contagious, and it responded poorly to various modes of treatment; therefore, medical doctors carried out research in an effort to decrease the ravages of this affliction. Peterson and Green recalled a trachoma study led by Dr. Phillips Thygeson of Columbia University in which some staff members participated. Researchers infected rhesus monkeys with trachoma to determine the most effective treatment modes.<sup>2</sup>

Peterson wrote, “A chart was kept on each one, stating medication given, treatment or surgical procedure performed.” One of the medications they tried was sulfa, and Green referred to its use. “After the monkeys['] eyelids showed evidence of infection, we tried the sulfa on them. It was quite a job to get them to swallow the pills. We hid them in banana slices. Some were so smart they pried them out.” Significantly, the study verified that trachoma was, and is, a viral disease. The Thygeson study did not illustrate the superior performance of sulfa, but Green did allude to such research. “Dr. Loe at one of the agencies, called to Dr. [Polk] Richards’ attention that he had noted considerable improvement in patients who were given Sulfa Therapy [*sic*] for some other reason.” The medical details that these women elucidated illustrate the significance they placed on the scientific model. Green and Peterson exemplified the growing emphasis on more rational scientific methods.<sup>3</sup>

Associated with modernity, these women observed and participated in the rising use of scientific methods within nursing and medical practice. Their stories give us insight into characteristics associated with the new woman, a topic that has garnered attention over the last decade in literature dealing with the history of nursing, including work done by Susan Reverby, and Alison Bashford. Most of the nurses in this study were unmarried, and the single educated woman represented the hallmark of the new woman. The narratives left by these women indicate that these nurses, like other new women, sometimes threw out the rulebook as they demonstrated concern for their patients, and an affinity for science.<sup>4</sup>

While it may seem natural for nurses to gravitate toward biological knowledge, it is important to acknowledge that the rising use of scientific inquiry was part of a broader movement in the United States. New women found science increasingly attractive. Home economists focused on the value of domestic science; publishing articles in the pages of *Ladies Home Journal*, *Good Housekeeping*, and *Woman's Home Companion* during the twenties. Women's colleges added courses in the social sciences, including economics, psychology and sociology. Vassar instituted a major in euthenics, "the scientific study of the home," and a number of new women were particularly attracted to the developing scientific field of anthropology.<sup>5</sup>

Like other scientists, medical workers focused increasingly on specific methods of gathering knowledge, though their goal was to advance therapeutic care. Such emphasis is evident in Estelle Peterson's nursing narratives she prepared for a supervisor in 1940. Reporting on patients with trachoma, she wrote, "Sixty four [*sic*] trachomatous children . . . received approximately a half grain of sulfanilamide per pound of body weight divided in three doses a day for an average of twenty days." The significance of observation following treatment to evaluate side effects of medications is clear in Peterson's continuing comments. "All the children tolerated the drug very well and occasionally an older child would complain of headache which seemed transitory and the drug was continued." While she may have expounded on trachoma treatment to reinforce her supervisor's confidence in her competence, it remains clear that Peterson adhered to

medical prescriptions based on scientific knowledge, and conducted nursing observations in keeping with standards of nursing practice. “Watchful care” has been intertwined with nursing since Florence Nightingale established its significance for patient care, legitimizing nursing as a trained occupation. The ability to observe changing conditions, both improvements and declines, has always been an essential skill that allows nurses to intervene technically and scientifically on a patient’s behalf when necessary. Peterson was somewhat different in her approach though, in that she focused on scientific methodology as part of a concerted effort to determine effective treatment for trachoma. Her work reflected the modern trend that emphasized rational, scientific approaches toward problem-solving; therefore, Peterson typified the new woman.<sup>6</sup>

The single educated woman represented the hallmark of the new woman, and most of the nurses in this study were not married. As new women, they sometimes displayed pride in their intellectual abilities and scientific knowledge. Peterson, a field nurse, commented on this topic, “I enjoyed traveling from one reservation hospital to another and meeting nurses that had been trained in excellent hospitals from all over the U.S.A.” Additionally, Marie Dunlap displayed the significance of technical skills at Keams Canyon, Arizona. “You know there were 2000 Hopis & 2000 Navajos—you had to do lots of different kinds of nursing – such as giving Typhoid vaccine right in the Hogans” [*sic*]. These women illustrated the significance of their scientific nursing knowledge, both as a matter of personal and professional pride, and as a necessity in delivering patient care.<sup>7</sup>

In her book, *The Physician’s Hand*, women’s historian Barbara Melosh also noted such characteristics concerning nurses of the 1920s and 1930s. Melosh indicated that nurses exhibited satisfaction with their technical and scientific skills, and they often objected when private-duty employers trivialized their abilities to carry out their expertise. They were insulted because complexities of the profession required nurses to fuse myriad segments of information to serve their patients. Like Melosh, Margarete Sandelowski argues that nursing’s function has always been more significant than merely acting as “the physician’s hand.” Cognitive skills stand out among nurses, Sand-

elowski believes, because “nursing is largely brain work.” Predominantly, knowledge that is applied to nursing care comes from the sciences—anatomy, physiology, biology, microbiology, and chemistry. Over time, as the nurses in this study have demonstrated, members of the profession focused increasingly on the scientific aspects of nursing, and such activities exhibited a trend toward increasingly modern gender notions of nursing.<sup>8</sup>

The emphasis on scientific and intellectual knowledge seen in nurses’ accounts existed as part of a broader cultural phenomenon of early twentieth-century America, which, in part, served as a response to Victorian gender roles. One segment of the nineteenth-century cult of true womanhood, advanced by physician Edward Clarke, purported that higher education threatened women’s physical ability to bear children. As greater numbers of women pursued higher education during the late nineteenth- and early twentieth-centuries, they began to question such vague ideas and concluded that Clarke’s abstract notion lacked foundational scientific evidence. As a result of their research, they concluded that such traits were rooted in cultural habituation instead of inborn biological divergence of the sexes. This radical idea had far-reaching effects, rocking the very foundations of Victorian scientific belief, which declared that biology loomed over culture in determining sex differences.<sup>9</sup>

New ideas concerning the divergence of the sexes helped fuel the drive for empirical scientific knowledge, as new ideas regarding scientific research emerged. Utilizing detailed methods of data collection, social scientists illustrated that cognitive and emotional traits were strikingly similar. Science could no longer be based on antiquated abstract theories like those of Dr. Edward Clarke. In modernity, social scientists increasingly relied on meticulous studies, displaying results with graphs and statistics in addition to narratives, and medical science benefited from rising utilization of specialized instruments, including the microscope.<sup>10</sup>

Modern concepts of gender and the rising significance of scientific practice are apparent within a nursing textbook that was published in 1935. *The Science and Art of Nursing* includes objectives delineated by the National League of Nursing Education that urge

students “to develop . . . a keen interest in the human side of the nurse’s work as well as in the scientific and practical side.” Note the attention to psychosocial aspects of nursing, historically defined as the “art” of nursing. This notion of nursing as an art is worthy of exploration because nineteenth century ideas concerning womanhood were bound to this concept. Tied to the maternal figure, Victorians viewed the ability to nurture as an inherently female characteristic. Similarly, the reference to art in the title of the textbook suggests that although some women may have displayed nurturing qualities, these capabilities would be honed during the course of their education. It also implies that some trainees may not have possessed inherent qualities conveying concern and nurturance; therefore, it was necessary to teach such skills. This implication departs from middle-class Victorian ideology, which held that women possessed a natural talent for nurturing.<sup>11</sup>

The concept that nurturance could be a learned skill aligned with more modern ideas about differences between the sexes. Ella Rothweiler, RN, author of the text, discusses nursing as a learned craft. “The student nurse must strive to . . . attain to that understanding of human nature which is one of the finest of fine arts as well as one of the essentials in the practice of nursing.” “It is said that good nurses are born. It is true that nursing seems to be natural with some, but that does not mean that one may not train herself to be an efficient nurse.” Rothweiler’s statement acknowledged complex scientific beliefs of modernity that demonstrated that differences between the male and female sexes were not predetermined biologically; instead, gender disparities were culturally acquired.<sup>12</sup>

Considered a female career, nurses were confined to certain procedures, in contrast to male physicians who practiced a wide range of skills. BIA nurses, however, succeeded in creating fuzzy areas as they pushed defined limits of practice. The BIA was plagued with staffing shortages; both nurses and physicians found it difficult to be everywhere at once. As a result, doctors often called upon nurses for assistance, and sometimes nurses performed procedures that were beyond the contemporary scope of nursing practice, at least in the East. One nurse, Ethyle Denton, was briefly assigned to an eastern

hospital. Accustomed to functioning independently in the American West, her actions drew criticism. "When I went to Pennsylvania Hospital for awhile," Denton recalled, "I was constantly being told, 'No don't do that, the interns are the only ones that can start & stop IV's' [intravenous fluid treatments]. . . So I'd apologize [*sic*] and explain that I was used to doing those things as well as draw blood for tests. This shocked the nurses there!" While her account raises issues concerning nursing ethics, it is clear that Denton was pleased with her own self-sufficiency. She liked to push the limits.<sup>13</sup>

In contrast, Ruth Riss Seawright voiced trepidation concerning her role as a BIA nurse. Seawright completed her nursing education in Pennsylvania in 1924, and gained clinical experience as a private duty nurse in a hospital and as a visiting nurse in the East for four years prior to joining the BIA in 1928. Through her work in private duty nursing and public health nursing, she learned to function fairly independently.<sup>14</sup>

When she arrived at the Rocky Boy Reservation in Montana, Seawright discovered that she would perform her job duties even more autonomously. Noting that the BIA physician was based elsewhere, Seawright asked the reservation superintendent, "If you do not have a doctor, who dispenses the medicines?" His reply was disturbing: 'You do[,] and God help you [if you] don't know what you are doing.' Her initial distress is clear, "There I was 35 miles from the contract doctor and I had never given a patient 5 grains of aspirin without a doctor's order." [Five grains of aspirin is equal to one tablet.] Obviously, Seawright did not have the access to physicians that she was accustomed to as a nurse in the East. Lack of BIA support called for action, and nurses like Seawright who did not want to neglect their patients moved beyond proscribed standards of nursing practice, blurring boundaries between nurse and doctor, female and male.<sup>15</sup>

Such situations were common. As a trachoma nurse, Estelle Peterson traveled from one reservation to another to provide treatments. During a visit to Tohatchi, New Mexico, she called on other skills to assist another nurse. Peterson vividly describes delivering a baby without a doctor present:



There wasn't a doctor there at the time. The hospital was small and only one nurse. The family brought this young patient to the hospital. She had been in labor a long time and [was] dehydrated. It was obvious she could be delivered only by having an episiotomy [a perineal incision] and forceps. Long distance telephone calls in that day were rarely done but we called Fort Defiance and told the doctor our predicament. He gave orders over the phone, an episiotomy was done, forceps applied, a live baby and a happy mother and family. The excellent training I had had at Michael Reese stood me in good stead. Needless to say, we were two worried nurses before this ordeal was over.

Despite these women's anxieties, Peterson clearly takes pride in her autonomy, illustrating that obstacles could also offer opportunities to take control.<sup>16</sup>

Findings of the Meriam Report, a comprehensive investigation of the Bureau of Indian Affairs published in 1928, confirm that field nurses like Seawright and Peterson expressed concern about violating standards of practice. BIA field nurses were frequently educated in public health nursing; for instance, Jennie Nelson mentioned that she took courses in public health at the University of Minnesota. Thus, nurses were often more familiar with this type of care than BIA physicians. The report pointed out physicians' deficiencies in public health care, outlining the quandary that these women faced: "As a consequence, if she is to function at all effectively, she must work more or less independently. This procedure she believes is forced upon her though it is in direct violation of all public health nursing ethics, and it greatly curtails her work." Nevertheless, savvy nurses certainly would not tell members of the Meriam Commission that they liked taking the lead, or that they secretly enjoyed possessing more knowledge than physicians did.<sup>17</sup>

Still, nurses held themselves accountable for adhering to ethical issues in the early half of the twentieth century. Before 1920, there were no legal standards governing nursing practice and legislation enacted by the mid-1920s recognized accreditation of nursing schools, but failed to enforce it. Under this system, graduates did

not take licensing exams; they merely presented diplomas to state boards of nursing to receive the title "registered nurse." These laws existed on the books in all states, but no state mandated such registration, and uneducated nurses were not prohibited from practicing. New York passed the first compulsory licensing legislation in 1938, but the majority of such laws lacked strength until after World War II. Without sturdy regulatory bodies, nurses monitored their own ethical standards.<sup>18</sup>

As Peterson's and Seawright's narratives indicate, nurses often functioned independently because physicians were not readily at hand. Part of the problem rested in barriers to travel, as Seawright noted. Another dimension of their autonomy was rooted in inadequate staffing of physicians. In Peterson's account, she reports that there was no physician in Tohatchi; the position was vacant. Extremely low physician salaries and extraordinary burdens of responsibilities contributed to unfilled positions. In 1924, physicians earned only \$1, 200 annually. A BIA critic denounced this salary, noting that day laborers made more money than doctors did. As a result, a fifty-six percent vacancy rate existed in 1927. Physicians were expected to treat patients at the agency hospital, but they also were responsible for answering calls from thousands of people for their services in outlying regions of reservations. Sometimes they served more than one reservation; therefore, their territory constituted hundreds of miles. Why did physicians (and nurses) have to function under such conditions? The problem can be traced to insufficient congressional funding fostered by assimilation policy. Despite increased budgets, financial constraints affecting medical practice persisted into the 1950s.<sup>19</sup>

Poor funding meant that BIA nurses found themselves in precarious circumstances that required activities beyond accepted standards of practice. Such situations called for resourcefulness, skill, and courage. Nurses demonstrated these qualities as they crossed the line dominated by male physicians. By doing so, nurses in this study moved toward new definitions of nursing. Estelle Peterson's words echo from the past, "The excellent training I had had at Michael Reese stood me in good stead." Challenge? Peterson could handle it.<sup>20</sup>

As new women who embraced modernity, the nurses in this study eagerly responded to the demands of their jobs. Both Green and Estelle Peterson enthusiastically adopted scientific research, as seen in their descriptions of experiments on rhesus monkeys. Thus, they were research pioneers who recognized their contributions. It is clear then, that BIA nurses shifted from Victorian notions of nurturing to modern gender roles. Tossing out the rulebook, they favored patient care, actively modernizing notions of nursing. When these nurses bridged the gap between male physicians' roles and female nursing limits of practice, they smudged the edges of the once rigid gendered definition of nursing. Thus, they may be characterized as women who shifted between the traditional and the modern, reshaping ideals of new womanhood as they celebrated their skills and knowledge to recast "nursehood."<sup>21</sup>

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## Notes

- 1 “Brief Historical Summary of Nursing in the Indian Health Program,” January, 1964. (Unnumbered) Box 1, Series 2, Folder 6. Brown, Bahl, Watson Collection, Northern Arizona University, Flagstaff, Arizona.
- 2 Robert A. Trennert discusses trachoma, the Thygeson study and Loe’s research in *White Man’s Medicine: Government Doctors and the Navajo, 1863-1955* (Albuquerque: University of New Mexico Press, 1998), 100; Questionnaire Response from Janet Green to Ida Bahl, 12 January 1975, Brown, Bahl, Watson Collection; Questionnaire Response from Estelle Peterson to Ida Bahl, undated. (Entry 31) Box 1, Series 2, Folder 10. Brown, Bahl, Watson Collection.
- 3 Janet Green, Brown, Bahl, Watson Collection; Estelle Peterson, Brown, Bahl, Watson Collection. Robert A. Trennert discusses trachoma, the Thygeson study and Loe’s research in *White Man’s Medicine*, 100, 191-95. Regarding the rise of science, please see Rosalind Rosenberg, *Beyond Separate Spheres: Intellectual Roots of Modern Feminism* (New Haven: Yale University Press, 1982), iv, xv, xvii, 70-71, 80, 169-75.
- 4 Alison Bashford touches on the topic of the new woman in *Purity and Pollution: Gender, Embodiment and Victorian Medicine* (New York: St. Martin’s Press, 1998), 107-47. Susan Reverby discusses the evolution of nursing and connections to culture and society in *Ordered to Care: The Dilemma of American Nursing, 1850-1945* (New York: Cambridge University Press, 1987). In her chapter on nurses, Sandra Schackel deals more extensively with this topic. Please see *Social Housekeepers: Women Shaping Public Policy in New Mexico, 1920-1940* (Albuquerque: University of New Mexico Press, 1992), 61-85; Ware also discusses the new woman in *Beyond Suffrage: Women in the New Deal* (Cambridge: Harvard University Press, 1981), 24-32.
- 5 Reverby, *Ordered to Care*, 151-58; The bishop is quoted in Brown, *Setting a Course*, 168. Please also see 18, 108, 136, 168-69.
- 6 Susan Reverby discusses the move to rational scientific methods in *Ordered to Care*, 143. Charles E. Rosenberg discusses the link between science and medical care of patients that emerged following World War I in *The Care of Strangers: The Rise of America’s Hospital System* (New York: Basic Books, 1987), 158-59, 335-36, 345-46. Please also see Estelle Peterson, Brown, Bahl, Watson Collection. Margarete Sandelowski discusses “watchful care” in *Devices & Desires: Gender, Technology, and American Nursing* (Chapel Hill: University of North Carolina Press, 2000), 135, 139. Also, please see Barbara Melosh, *The Physician’s Hand: Work Culture and Conflict in American Nursing* (Philadelphia: Temple University Press, 1982), 83; Deacon, *Elsie Clews Parsons*, 262-65, 359-60.

- 7 Estelle Peterson, Brown, Bahl, Watson Collection; Questionnaire Response from Marie Dunlap to Ida Bahl, undated. (Entry 15) Box 1, Series 2, Folder 8. Brown, Bahl, Watson Collection.
- 8 Melosh, *Physician's Hand*, 83, 217; Sandelowski, *Devices & Desires*, 2, 10-11, 192.
- 9 Rosalind Rosenberg, *Beyond Separate Spheres: Intellectual Roots of Modern Feminism* (New Haven: Yale University Press, 1982), iv, xv, xvii. Margaret Jacobs has discussed roles of Victorian women in *Engendered Encounters: Feminism and Pueblo Cultures, 1879-1934* (Lincoln: University of Nebraska Press, 1999), 21-22, 25.
- 10 Rosalind Rosenberg, *Beyond Separate Spheres*, iv, xv, xvii, 70-71, 80, 169-75; For an example of social scientists' analysis that includes graphs, please see Herman Hausheer and Jessie O. Moseley, "A Study of the Unmarried," *Social Forces* 10 (1932): 394-404; Charles E. Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (New York: Basic Books, Inc., 1987), 157-59, 342-45.
- 11 Ella L. Rothweiler, *The Science and Art of Nursing* (Philadelphia: F.A. Davis Company Publishers, 1935) title page, 4-6; Rosalind Rosenberg, *Beyond Separate Spheres*, xv-xviii.
- 12 Rothweiler, *Science and Art*, 4-6, 196-97; Rosalind Rosenberg, *Beyond Separate Spheres*, xv-xviii.
- 13 Questionnaire Response from Ethyle Denton to Ida Bahl, undated. (Entry 12) Box 1, Series 2, Folder 8. Brown, Bahl, Watson Collection.
- 14 Questionnaire Response from Ruth Riss Seawright to Ida Bahl, 16 January 1978. (Entry 41) Box 1, Series 2, Folder 11. Brown, Bahl, Watson Collection, Northern Arizona University, Flagstaff, Arizona; "Brief Historical Summary of Nursing in the Indian Health Program," January, 1964. (Unnumbered) Box 1 Series 2, Folder 6. Brown, Bahl, Watson Collection, Northern Arizona University, Flagstaff, Arizona.
- 15 Ruth Riss Seawright, 16 January 1978, Brown, Bahl, Watson Collection.
- 16 Estelle Peterson, Brown, Bahl, Watson Collection. Robert Trennert discusses trachoma among the Navajos in *White Man's Medicine*. For example, please see 5, 100-02, 127-30, 132-33. Todd Benson also covers this disease among various tribes in "Race, Health, and Power," 42-108.
- 17 Institute for Government Research, *Problem of Indian Administration* (Meriam Report) Reprint (New York: Johnson Reprint Corporation, 1971), 248-49; Questionnaire Response from Jennie E. Nelson to Ida Bahl, 12 October 1974. (Entry 28) Box 1, Series 2, Folder 9. Brown, Bahl, Watson Collection.

- 18 Melosh, *Physician's Hand*, 39-40.
- 19 Todd Benson, "Race, Health, and Power: The Federal Government and American Indian Health, 1909-1955" (PhD diss., Stanford University, 1993), 25-27, 232-33, 305. Benson discusses inadequate funding throughout his dissertation.
- 20 Estelle Peterson, Brown, Bahl, Watson Collection.
- 21 Janet Green, Brown, Bahl, Watson Collection; Estelle Peterson, Brown, Bahl, Watson Collection.