WOMEN, MEDICINE AND SCIENCE:
KANSAS FEMALE PHYSICIANS 1880-1910

by

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PREFACE

This project's initial intention--to research the medical care of women in Kansas during the late nineteenth century--proved less than productive. Physicians left few, if any, records about specific treatments. For example, Dr. J. A. Read of Tecumseh, Kansas, kept account records and a daybook.[1] The daybook listed all his patient visits but only gave very sketchy information about diagnosis and treatment. Similarly, women who recorded their experiences in diaries and letters wrote only with passing reference to illness. For example, the diary of Emily Butcher recorded that "mama was taken down with typho-malaria fever." She did not mention her illness again until three weeks later when she noted that "mama was much worse." It was three weeks again before she noted that "mama commenced eating and sat up [for] awhile."[2] As a consequence of the lack of detailed information, this study changed from a focus on the patients to a focus on the female physicians who gave the care. A number of these female practitioners left records of care in the form of medical journal articles.

Though most medical journal articles only express what physicians thought, some provide evidence of actual

case studies that recorded specifics of care about anonymous patients. Kansas physicians published their professional papers in state and national medical journals for distribution to the professional community. Among the journals, the Journal of the Kansas Medical Society, the Kansas Medical Journal and the Women's Medical Journal proved most useful. Others used included the Journal of the American Medical Society and Journal of Obstetrics, Gynecology and Diseases of Children.

The Women's Medical Journal was particularly significant because it was a contribution solely by women in medicine. Published initially in 1893 in Toledo, Ohio, it remained entirely the work of female physicians until 1901. At that time, the addition of abstracts from other medical journals and, in 1906, inclusion of an original article contributed by a male physician, reflected changing attitudes. Several Kansas female physicians contributed articles to this journal as well as to the Kansas journals. Its intention was to print information of interest to the masculine as well as the feminine part of the profession, and to do all in its power to reflect the sentiment of women practitioners and enhance their interests, as far as possible to do in a journal. The female staff and contributors were scattered throughout the nation. Its circulation grew steadily and substantially.[3]

The woman's journal was started to provide a vehicle

for expression of women's views and to promote their place in the profession, since other professional publications did not address these needs. Its editorials reflected this attitude, often being caustic toward the treatment and criticisms that female physicians received from the profession. In reply to the editor of the National Medical Review, who declared that women in the profession were a "lamentable failure," the journal reported: "Women in medicine are a success. They have come to stay. The motives of women in the profession are high and honorable and our work speaks for itself."[4] Women, according to the journal, had to be better than their male counterparts in order to prove themselves. As a resource, the women's journal proved to be quite valuable as a reflection of women's issues and attitudes.

Other sources--personal papers, minutes of medical society meetings, minutes and catalogues of medical schools, newspapers, family papers, and county histories--also yielded pieces of information. Also used were monographs and prescriptive materials, such as medical advice books published for the laity. The overall task proved painstaking, but rewarding in the end.

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I. INTRODUCTION

Women who desired to be physicians in the mid-nineteenth century faced stalwart opposition from members of the medical profession, whose arguments echoed societal norms concerning the appropriate role of the female in Victorian society. Despite claims that women were too frail, too delicate, and too intellectually inferior to be doctors, one woman, Elizabeth Blackwell, managed to gain admission to the Geneva Medical College of New York. She received her medical degree from there in 1849. In response to resistance on the part of the majority of medical colleges to admit female physicians, there were some schools which opened solely to accommodate female students. The Women's Medical College of Philadelphia, founded in 1850, was the first. Others included the Women's Medical Colleges of Chicago and Baltimore and the New England Women's Medical College. With the exception of the Philadelphia institution, female educators regarded the women's colleges as temporary expedients until they could obtain medical co-education.[5] Accessibility for females to most medical schools in the twentieth century accomplished only a partial victory since the achievement did not

establish equality with male students. The women who entered coeducational medical schools continued to find themselves an isolated group far from the mainstream of American medicine.[6] Coeducation proved disappointing for several reasons, including strong cultural resistance to career women in general, the contradiction between women's traditional domestic role and their role as physicians, and various subtle forms of institutional discrimination. They also were isolated from the support of the female community that the women's colleges, despite their problems had provided.[7]

Most of the earliest female doctors belonged to that group of nineteenth-century women whom historians have labeled "domestic feminists."[8] They viewed the study and practice of medicine as part of a larger effort to adapt traditional concepts of womanhood to an unstable, complex, and rapidly industrializing society. Application of the idea of domesticity, in turn, increased the intensity of power for women within the family and for some in the society at large. They were not uncomfortable with the concept of women's role in the home and family, and it in fact supported their argument for entrance into medicine. While emphasizing their "natural" nurturing capacity, they argued that their contribution would improve the health of women patients who were reluctant, and who sometimes even refused, to seek medical care from male practitioners. The

supporters of female practitioners argued that women would seek care for their physical problems if they could consult women as physicians. As physicians, women would elevate the medical profession as well as the place of women in society. Even some male practitioners believed that the addition of women to medicine would "elevate the profession."[9] Women's intellectual abilities were channelled into service appropriate to nineteenth-century conceptions of women's sphere. Stimulated by the antebellum health reform movement, they understood that in order to purify society some women might have to enter it. Thus women who entered into the public world did so without leaving traditional womanly concerns.

During the time in which females were emerging as practitioners, the profession of medicine was experiencing turmoil over therapeutic techniques. Debates arose in medicine over appropriate treatment methods, but not over general holistic orientation designed to restore the balance between the environment and the individual. A gradual transition to scientific therapeutics which led to controversy among practitioners. Factions evolved in response to these disagreements over appropriate therapeutics. The factions or sects--botanics, eclectics, homeopaths and regulars--divided medical practice and sometimes decreased its credibility. Gradually, the eclectics and "regulars" were recognized as "legitimate

practice," and they came to dominate the profession.[10] Other factions continued to exist, under heavy criticism, until state legislation for mandatory licensing forced them out. Licensing was instituted in Kansas in 1870. After this, those who could prove graduation from a recognized medical school though not necessarily a regular one, could obtain a license to practice.

Subsequent to the problems of factionalism a gradual transition to scientific understanding of disease processes occurred. Medical advances, including antiseptic surgery, vaccines, diagnostic instruments, and bacteriological tests, aided in the linking of causes and symptoms as a step in systematic diagnosis and treatment of disease processes. These changes gradually replaced holistic therapies designed to restore a balance between the environment and the individual.

This change challenged old ways of treatment for all physicians, but also brought into question, in particular, the connection women had to the profession. The new bacteria questioned the holistic view of disease with its moral and religious implications. Often equated with sin and the violation of Nature's laws, physicians reasoned that disease was accompanied by ugliness and pollution as a manifestation of immoral activities or a disruption of Nature. As understood in this context, filth did not mean microbial contamination. To some physicians the science

appeared to developed at the expense of traditional holistic therapy. Female physicians, in particular, as "medical mothers" found the application of the traditional role in their new sphere threatened. They thus lost their connection as women to medicine.

When female practitioners established their places within the profession, some of them began to emphasize the contribution they could make not only to women's health, as women who were physicians, but also to quality care as an extension of their traditional sphere. With a special understanding about women and their illnesses that many believed the male physician did not possess, they advocated changes in the socialization and education of girls in order to build stronger, informed women, both physically and psychologically. They also criticized some of the standard treatments such as vivisection (surgical removal) of female genital organs, and substitution of preventive measures such as education in health and female physiology. They adapted preventive medicine through the teaching of laws of physiology and hygiene in connection with antebellum health reform by virtue of their new roles in an increasingly complex society. They believed that knowledgeable women would be better mothers who reared healthier children and who would enjoy improved physical health themselves, because they understood their own bodily functions and basic health rules.[11]

Women physicians in Kansas between 1880 and 1910 supported these preventive measures, advocating both preventive gynecology and antivivisection because they too clung to traditional ideas of disease requiring "natural cures." The new bacteriology with therapeutics tailored to specific disease entities threatened to undermine their place in the profession as protectors of the "moral and natural order" of things. They saw their role as revealing and teaching the laws by which people could maintain the proper balance between the environment and individual behavior in order to restore and maintain health. As respected members of the medical profession, six Kansas female physicians, whose careers form the basis of this study, expressed their position as traditionalists in their practices, in their medical education, in their publications, and in their public presentations. Though the records of most Kansas female physicians do not remain to tell of their therapeutic philosophies and standards of practice, the ones surviving indicate that they were recognized and respected contemporary members of the medical profession, that they espoused traditional therapeutics, and that they were tempered by their struggle for purpose and identity as females in the profession. Even brief records of the lesser known female physicians, such as obituaries, news accounts, or brief biographies in Kansas history books, present female physicians as

respected and admired for their skills and contributions to society.

At least eighty-six female physicians practiced in Kansas between 1880 and 1910. It is almost certain that there were more, but incomplete archival evidence prevents positive identification of them. At least thirteen (fifteen percent) of the eighty-six identified Kansas female physicians published professional papers in state and national medical journals. Sixteen (nineteen percent) belonged to professional associations or attended professional meetings in the state. Six (seven percent) were faculty members at either the Kansas Medical College in Topeka or the Women's Medical College in Kansas City, Missouri.

Half of the Kansas female physicians identified attended the Kansas Medical College in Topeka. This school was a co-educational, private, proprietary college founded in 1890 by Dr. John C. McClintock, Dr. M. B. Ward, and Dr. John E. Minney. These doctors served on the first board of directors with seventeen other Topeka physicians and businessmen. It was run as a corporation with local physicians composing the first faculty. The doctors McClintock, Ward, and Minney served respectively as treasurer of the corporation, secretary of the faculty and dean of the college. The school merged with Washburn College in 1903 after it became increasingly difficult for

the privately supported college to maintain adequate standards and facilities. Ten years later it again merged, this time with the Medical College of the University of Kansas. The first faculty employed in 1890 consisted of twenty-four Kansas physicians, all of whom continued in private practice. The initial session admitted twenty-two male medical students, while the second had thirty-three students, including six women. Two of these, Frances Storrs and Agnes Wallace McKee, graduated in 1893 as the first females to receive diplomas from the institution. They were members of the third graduating class.[12] The Women's Medical College of Kansas City, Missouri, opened its doors in 1880 and closed them in 1903. The College of Physicians and Surgeons of Kansas City, Missouri, was founded in 1870 and later renamed the Kansas City Medical and Chirurgical College. The Kansas City, Kansas, College of Physicians and Surgeons College was established in 1897 and merged with the Medical and Chirurgical College and the Kansas City, Missouri, Medical College with the University of Kansas School of Medicine ten years later. The Medical and Chirurgical College and Kansas City, Missouri Medical College did not admit women until they merged with the University of Kansas.

For the purposes of the present study, the careers of six female doctors serve as examples of women in medicine in Kansas. The six selected were active as members of

professional organizations, as medical educators, and as contributors to professional journals. The six chosen include Dr. Deborah K. Longshore, Dr. Maggie McCrea, Dr. Ida Barnes, Dr. Frances Storrs, Dr. Sara Greenfield and Dr. Frances Harper. Three attended the Kansas Medical College and the other three attended medical colleges out of state in two of the seven states where female medical education then was clustered.[13] This pattern is representative of female medical education in Kansas and nationwide. Three were members of the faculty of the Kansas Medical College, a much higher percentage than the larger group. It is reasonable to expect that the faculty members would contribute to medical literature and be the spokespersons for women in the profession since they most likely kept themselves up-to-date on recent medical information as educators and may have conducted research.

A factor in the technique of selection was the year of graduation from medical college. The careers of the six female physicians spanned the period 1880-1910. The first, Deborah Longshore, graduated from the Women's Medical College of Philadelphia in 1872. The youngest, Frances Harper, graduated from the Kansas Medical College in 1904. In the larger group of Kansas female physicians, the earliest, Phoebe Amelia Oliver Briggs, graduated from the Women's Medical College of Philadelphia in 1870, and the last, Wilifred Page and Beatrice Isenberger, graduated from

the Kansas Medical College in 1909. The wide range for the six selected provides access to opinions throughout the period of study and correlates to the larger group. All of the six selected attended schools of regular therapeutics, as did seventy-seven (ninety percent) of the larger group.

Dr. Deborah K. Longshore (1842-1919), born Deborah K. Smith, to a Quaker family from McConnell, Pennsylvania, graduated from the Women's Medical College of Philadelphia, in 1872. Settling in Topeka, Kansas, in 1879 with her husband Edward, Dr. Longshore established a practice almost immediately. According to the Topeka Capital Journal, Dr. Longshore overcame prejudice against female physicians "by her skill and efficiency...willingly [giving] her services to those in need, regardless of remuneration."[14] She often went day and night to care for some of the most prominent families of Topeka and was occasionally scolded by her husband for taking so much time with her patients.[15] Her nephew described her as possessing a curious and inquiring mind. She was an independent spirit, not only in her choice of vocation, but in her non-conformity in clothing. Physically small and plump, she preferred two-piece dresses, with pockets twenty inches square in her skirts.[16] As a prominent Topeka citizen, and a member of several civic organizations such as the Good Government Club, and the Kansas Woman's Day Club, she gained respect within her profession as a member of the Kansas State

Medical Society by 1880.[17] By 1883, she accepted the office of second vice-president and, by 1885, was a member of the committee on the practice of obstetrics. She also served on the board of censors and membership. In 1887, Dr. Longshore was elected as a delegate to the American Medical Association. Locally she belonged to the Topeka Academy of Medicine and Surgery where she presented professional papers.

Dr. Maggie McCrea (1854-1938), chronologically the second physician in the study, was born in 1854 in Crawfordsville, Iowa. She moved at age ten to Winchester, Kansas. Dr. McCrea graduated from the Rush Medical College of Chicago in 1880 and took post-graduate work at the Northwestern Women's Medical College in 1891. Returning to Topeka for a short time, she spent the majority of her practice in Winchester, Kansas City, and Sterling, Kansas, until her death in 1938 at the age of eighty-four.[18]

Dr. Ida Barnes (? -1910), a native Kansan of pioneer parents, was born in Jefferson County in the north-east part of the state. She received an A.B. from the University of Kansas in 1885 and a medical degree from the Women's Medical College of Philadelphia in 1890. After a year as resident physician at the Women's Hospital of Philadelphia, Dr. Barnes completed post-graduate work in electro-therapeutics, in x-ray, and in radium. Returning to Kansas the following year, she settled in Topeka. The

only woman listed in J. L. King's History of Shawnee County, she was in King's words the "leading physician and surgeon of Topeka, a lady who combined professional skill with attributes that made her an esteemed and beloved member of her set."[19] Beginning practice in Topeka in 1891 in "finely appointed offices at 726 Kansas Avenue," Dr. Barnes "utilized every pain alleviating medium of modern days which had received the sanction of the profession ... a lady of most enlightened [sic] news and a great force of character." She became a charter member of the Western Association of Obstetrics and Gynecology in 1895, the same year she accepted the office of treasurer of the Kansas Medical Society and the next as President of the Topeka Academy of Medicine and Surgery.[20]

Dr. Frances Storrs (? -1925), had the distinction of being one of the first two women graduates from Topeka's Kansas Medical College in 1893. She finished second in her class according to her test scores.[21] As a member of the third graduating class, the first class to complete a full three year course, she participated in professional organizations, such as the East Kansas Medical Society and the Topeka Academy of Medicine and Surgery.[22] By 1895, she had a partnership in private practice with Dr. J. C. McClintock. An advertisement for their joint practice ran regularly in the Kansas Medical Journal from 1895 to 1898.[23] Dr. McClintock was a distinguished surgeon at

Christ's Hospital, and one of the founders of the Kansas Medical College. McClintock and Storrs practiced surgery and gynecology exclusively. By 1889, according to an advertisement, Dr. Storrs had established herself in a single private "practice limited to surgery and gynecology [with] private hospital in the suburbs of the city under [her] personal supervision." Her office and residence were at 1318 Filmore St., Topeka, Kansas.[24]

In addition to conducting her private practice, Dr. Storrs found time to write numerous professional articles. She was first woman to teach at the Kansas Medical College, first as an instructor in Latin, and by 1896 as professor of the practice of surgery. The catalog of the college for the years 1896-1897 described her course in surgery as follows:

> taught by dedicated lecturers upon the principles and practice of surgery for the second and third year classes, regular clinics will be held...[which] students of these classes are to attend. Practice of surgery; course of didactic lectures upon the practice of surgery given in addition to the principles and practice.[25]

Dr. Sara Greenfield (1874-1932), a native Kansan, was born in Sabetha in 1874. After gaining an education at the University of Kansas, she matriculated at the College of Physicians and Surgeons at the University of Illinois, and earned her M.D. in the year 1900. Returning to Hiawatha near her home, she practiced there for a short time and then moved to Topeka in 1902. Dr. Greenfield became the

bacteriologist for the State Board of Health and had a laboratory in her home.[26] In 1903 she was elected assistant to the class of pathology in laboratory for one year at the Kansas Medical College. Following this she was appointed to the chair of bacteriology in Dr. Cole's absence at a monthly compensation of $25.00.[27] She subsequently held positions as Instructor in Histology (1907), Instructor of Bacteriology (1908), and Professor of Bacteriology and Histology (1909).

Dr. Greenfield's interest in bacteriology and prevention of disease sparked public campaigns. On March 3, 1903, she presented a paper on the care of consumptives to the State Board of Health which had "a great influence in sparking the fight [against] tuberculosis." Mrs. Bertha Campbell, a member of the State Board for twenty-three years, said: "Dr. Greenfield's letters to Dr. Crumbine over a number of years helped start his campaign against the disease." The Board of Health asked that Kansas physicians be given copies of the paper she read in 1903. As a result of her paper, it was agreed that specimens of sputum would be tested for $2.00 each as an initial step in prevention.[28]

The final female physician selected for this study, Dr. Frances Harper (? - ?), was a native of Galveston, Texas. She graduated from the Kansas Medical College in Topeka in 1904, where later she too became a faculty

member.[29] By the time she attended the Kansas Medical College, the course had been increased from three to four years. It was in the year prior to her graduation that the college had merged with Washburn College. Requirements for graduation included attendance at four full courses of instruction of six months each, dissection during three classes, clinic and hospital instruction during the last two terms, and satisfactory completion of all exams.[30] At her graduation Dr. Harper won two prizes: a phonendoscope, and the $10.00 alumni award for her student paper entitled "The Diagnostic Value of Urine Analysis."[31] Of the five graduate prizes awarded, three were won by female graduates. Dr. Harper established a private practice in Pittsburg, Kansas, although few records exist concerning her practical career.

The years 1880-1910 were especially significant in the history of medicine. The year 1880 is the approximate date marking the beginning of the understanding of the bacteriological theory of disease causation, or germ theory. For example, in 1878 Robert Koch (1843-1910) developed the technique for identifying bacteria, and, in 1880, Louis Pasteur (1822-1895) discovered the cholera vaccine. The year 1910 represents roughly the acceptance of the application of bacteriological principles by most of the profession. By then, women in medicine held appointments to many state health offices and institutions

had specialized within the field, and had published in respected scientific and medical journals. Shortly thereafter, they had their own professional networks, especially the American Medical Women's Association founded in 1915. The year 1910 is recognized as a dividing point due to the Flexner Report, a study of medical schools sponsored by the Carnegie Foundation. It publicized the inadequacies in medical education that the profession had been attempting to rectify during the past decade. Inferior students, meager or non-existant laboratory classes, poor clinical facilities, over-production of physicians, and required affiliations with hospitals were the most glaring inadequacies noted by the report. Only a little over half of the schools inspected had survived the higher standards by ten years later. One of these was the Women's Medical College of Kansas City.

This study shows that many women in medicine in Kansas, as well as those throughout the nation, remained faithful to traditional holistic disease concepts. This practice supported their place in the profession as preservers of the balance between the moral and natural order. Thus as physicians they entered into the public sphere without leaving their traditional female roles. The justification for the female in medicine was challenged when scientific understanding, particularly in bacteriology, changed the focus of disease causation.

Traditional holistic therapeutics, with both moral and religious implications, no longer justified women's traditional place in medicine. The six Kansas female physicians who form the basis of this study are examples of the struggle between traditional medical justification for the female role in medicine on the one hand and the perceived contradiction created by the new science on the other. The Kansas physicians supported the traditional female roles in medicine, but in some cases they subtly ways supported the new scientific principles as well.

To establish the broader context of the period 1880-1910, chapter two of this study presents a description of the state of medicine nationally. Kansas was naturally part of the larger picture. Chapter three continues with the context, presenting a discussion of the professional opposition experienced by female physicians, explanations of female illnesses as understood by the medical community, the response of women to the opposition and an explanation of the new science of bacteriology's effect on traditional values in medical care. Chapter four explores medicine as perceived by female physicians, both at the national level and in Kansas. In chapter five a comparison of the six female physicians from Kansas with those nationwide will demonstrate that a significant group of Kansas female physicians supported traditional therapeutics. They justified their places in the profession, expressed by

their work in support of preventive medicine, female educational reforms, and anti-vivisection. Yet they too experienced the conflict created by the new understanding of disease entities that threatened their new places in the public sphere but in traditional roles. Nevertheless, they adopted some of the new scientific ideology into their practices.

II. HISTORICAL CONTEXT

Medicine in Transition and Controversy

Discoveries in the field of bacteriology contributed to scientific applications in medicine during the last quarter of the nineteenth century. Perhaps the most significant contributions came from Robert Koch, Louis Pasteur and Sir Joseph Lister in the field of bacteriology. In 1867 Lister (1872-1912), a British teacher and surgeon, described antisepsis in surgery in the British Medical Journal. In the 1860s and 1870s Pasteur discovered the causative organisms of rabies and anthrax, while Koch isolated the tuberculosis bacillus and described the cause of cholera. The isolation of organisms responsible for dozens of major infectious diseases followed in the decade of the eighties. The so-called germ theory became generally accepted in the 1880s and 1890s.[32] Application of surgical antisepsis in the late nineteenth century greatly reduced mortality from operative procedures and thus increased the range of treatment possibilities in the field. The first therapeutic application of these new principles came in the mid 1890s with the development of a diptheria antitoxin. By the turn of the century physicians

began to use vaccines for typhoid, cholera, and tetanus.

In addition to antiseptic surgery and vaccines, numerous new diagnostic techniques came into use. A series of diagnostic instruments, including the ophthalmoscope (for eye exams), the thermometer, the banometer (to measure blood pressures), and the laryngoscope (to view the larynx), came into common usage. The microscope, x-ray, and chemical and bacteriological tests also contributed to diagnostic proficiency. Such advances provided physicians the beginnings of usable methods to link causes, symptoms, and lesions systematically in the new understanding of disease processes.

Physicians previously had believed disease to be the result of a single, underlying cause that disturbed the balance in the entire constitution. The entire focus of practice had been on the patient's symptoms, which were regarded not as signs of the disease, but as the disease itself. Physicians mainly classified themselves according to the therapeutic technique they practiced as either regulars, homeopaths, eclectics, or botanicals. Popular therapy utilized by regular practitioners included bloodletting, purging agents, counter-irritation, antipyretics, pain relievers, and tonics. Blood letting, utilized in the eighteenth-century up to the 1850s, but mentioned in Kansas medical literature, for example, as

late as 1883, was a favorite therapeutic technique. It was sometimes regarded as a panacea for all ills.[33]

Other physicians disagreed and identified themselves in sects including homeopaths, botanics, and eclectics. They each held different views of appropriate techniques to restore equilibrium while they tended to agree concerning therapeutic orientation. Homeopathy originated in 1790 with the German physician Samuel Christian Friedrich Hahnemann (1755-1843), whose practice in the nineteenth century challenged regular therapeutics. It was based on a theory that certain diseases would be cured by giving small doses of drugs.[34] Botanicals, also known as Thomsonians, like Homeopaths, challenged orthodox nineteenth-century medical practice. Samuel Thomson (1813-1882), believed disease to be an obstruction in the body's heat that caused derangements of the vital organs.[35]

Eclectics, along with regulars, composed "what was considered by the majority of the profession to be legitimate" practice in nineteenth-century medicine. The eclectic school of medicine, founded by Dr. Wooster Beach (1794-1868) in the 1820s, adapted elements of many other sects. Its system of "specific medication" paralleled homeopathy with its small doses and specific remedies, but also added rest, cleanliness, and kindness. The quality of medicine was more important to an eclectic

than its quantity.[36] Eclectic physicians often operated as independents. Dr. J. A. Read of Tecumseh, Kansas, for example, felt at home practicing any form of medicine his patient might request. This was the case due to Read's varied allopathic, homeopathic, and eclectic education and background. "I am an Eclectic," he wrote,

> because in the battle for medical reform they were at the forefront striking vigorous blows at the old errors, seeking not to glorify a sect, but to establish truth. And I am proud of Eclecticism because it feels no need of state or government support....And it has never established a "Code of Ethics" conflicting with the profound teachings of the Golden Rule.[37]

Medical schools were divided according to the theories or schools of medical practice but virtually all medical education lacked consistency and standards. Schools held sessions of varying length, had different entrance and graduation requirements, and included different subjects in their curriculum. The annual report of the Harvard Medical School of 1869-70 criticized the state of medical education thusly:

> The ignorance and general incompetency of the average graduate of American medical schools, at the time when he receives the degree which turns him loose upon the community, is something horrible to contemplate.... The whole system of medical education in this country needs thorough reformation.[38]

Johns Hopkins University led the reforms in 1893 when its medical school opened with an unprecedented requirement for a four-year degree for all entering students. As medical

schools added reforms, the former proprietary schools--privately run by physicians--began to disappear. The 1913 faculty minutes of the Kansas Medical College in Topeka explained why they decided to end operation.

> Due to the rapidly growing standards of first rate medical institutions above the power of ordinary private endowments to meet...fees that don't approximate cost, demand for full time instructors, possession and control of an ample hospital, entrance requirements becoming increasingly difficult, and demand for better qualified doctors....[39]

The faculty reluctantly merged with the medical department of Kansas University.

The question of females in medicine also contributed to the development of factionalism within the medical profession. For example, sectarian schools enrolled women in percentages two to four times the proportion of regular schools.[40] Only a handful of regular medical schools accepted female students prior to 1900. The majority denied them entry based on arguments concerning proper roles, female delicacy and mental inadequacy. Convinced that medical science needed "the leaven of tender humanity that women represent," some women sought medical education.[41] Women saw the potential connection of their traditional domestic role to medicine. They sought expansion of women's natural sphere into the public sphere. The greatest portion of doctors were also traditionalists who subscribed to the cult of domesticity that placed women

on a pedestal within the confines of the home. Yet they were reluctant to accept its extension into the public sphere. They also worried that women who sought professional training would neglect the responsibility of raising children and thus disrupt American family life. Women's mission, they believed, was to "rear the offspring and even fan the flame of piety, patriotism and love upon the sacred altar of her home."[42]

Dissatisfied with the progress of medical coeducation, female pioneers founded five women's medical colleges, thus further adding to division in medicine. The Women's Medical Colleges of Kansas City, Missouri, and Philadelphia are two examples of these women's colleges. Others established coeducational institutions. The Kansas Medical College in Topeka was co-educational from its beginning in 1890. The College of Physicians and Surgeons of Kansas City, Missouri, was co-educational by 1900.[43] All of these colleges taught regular therapeutics.

While physicians argued over the issue of women entering medicine, competing groups lent common support to secure medical licensing. The divisions slowly converged when educated regular physicians collaborated with sectarians to win licensing laws beginning in the 1870s and 1880s.[44] These laws would protect the profession from untrained practitioners whose presence would decrease the

credibility of medicine. The Kansas Medical Society established a board of examiners in 1870. Persons practicing medicine without a license would "be treated ethically as irregular practitioners."[45] This would include persons who practiced medicine without benefit of graduation from a legitimate regular or sectarian medical college. These laws gradually stiffened from requiring only a diploma to by the next century, a survey of the diploma and a state examination.

Another change in medicine came in the development of public health practices as a response to the new bacteriological findings. Specific measures, such as regulating water and milk supplies and cleaning foul air and contaminated physical objects, replaced older ideas like quarantine. This new public health movement also gained political acceptance. Quarantine policy was politically unpopular because it disrupted commerce by keeping workers isolated, while the new environmental approach caused less disruption and proved to be cost-effective. Another element of the new public health stressed individual health exams. Inspection of school children began in the 1890s and along with it the emerging specialty of pediatrics which emphasized prevention of childhood diseases.

Other specialties developed in response to rapidly

accumulating medical knowledge. No longer could one physician master all the details of new developments. The first specialty, ophthalmology, originated in the 1850s. But it was not until the 1880s and 1890s that a major rush to specialization began. For example, a whole group of surgical specialties such as thoracic and abdominal appeared in this decade. Others specialties at this time included gynecology, and anesthesiology. Radiology followed by 1900 after Wilhelm Roentgen's discovery of the x-ray in 1896.

Specialization, public health, and scientific advances prompted changes in the medical field. Yet even as it gradually evolved into a scientific profession, medicine remained in a crisis due to divisions created by the dispute over therapeutic methods and the controversy about female physicians. As long as the professionals remained divided, they failed to acquire public credibility. Ultimately, licensing and standardized educational requirements drew factions together in order to remove the quacks and unlicensed practitioners. Yet many attitudes dating as far back as the seventeenth and eighteenth centuries persisted. Public opinion toward physicians and medicine changed slowly.

Social Attitudes Towards Medicine

In pre-industrial nineteenth-century America, many citizens' self-confidence endowed them with abilities to deal with most illnesses. They apparently believed that common sense and natural intelligence could deal effectively with health problems and illnesses, as shown by the reluctance to consult doctors. Only when situations became difficult did people surrender their private judgement and seek physicians. Once medicine and its new technology demonstrated competence and success then the population were more easily convinced of the physician's authority. Since they were thus successful in their ministrations people more willingly sought the expertise and services of physicians.

Distrust of big business was also a factor in attitudes towards medicine. As the nineteenth century industrialized, many Americans distrusted and disliked big business and they viewed the emerging profession of medicine as a potential business monopoly. The Populist Party movement epitomized the belief in self-adequacy and rejected professional medicine along with big business especially in Kansas, the heartland of Populism.[46] But gradually as a result of an industrializing society, people became more accustomed to relying on strangers toward the

end of the nineteenth century. Communication and transportation improvements made physicians easier to consult. Technological change not only revolutionized daily life but seemed plausible to believe that it would do the same for healing, and eventually it did. As people began to regard science as legitimate they wanted physicians' interpretations regardless of whether the doctor had a cure to offer.[47]

Beliefs about the causation of illness also reflect social attitudes toward medicine. Most of society believed that both natural forces and God governed world events. One historian has traced the interplay of these two ideas by studying the three cholera epidemics of the nineteenth century. He illustrated that society blamed God for the first epidemic in 1832. Clerics attacked science as more responsible for the epidemic of 1849. In the third epidemic of 1866, criticism focused on public health methods and organizations.[48] Thus he illustrated both the existence of religious and naturalistic forces as well as scientific and medical progress. The focus flowed from religious to scientific causation as attitudes changed.

In addition to social attitudes, class affected medical care. Inequalities in education and skill among doctors paralleled class structure before the twentieth century. Wealthier families availed themselves of the

elite, highly educated practitioner, while the poor usually had access only to those practitioners with lower status and less training. Physicians' social position was not low, but it was insecure. In reality many doctors could barely support themselves by treating illnesses alone, and they frequently took on other work such as pharmacy, midwifery, or embalming.

The social attitudes of physicians emphasized the maintenance of propriety and respectability in order to elevate their professional positions. D.W. Cathell's The Physician Himself elaborated on the establishment of a proper distance between doctors and their clients. The physicians' attitude about their own social class expressed the belief that they could not allow people to get overly familiar with them. He warned:

> Conviviality has a leveling effect, and divests the physician of his proper prestige. Appearing in public in shirt sleeves, unwashed, and unkempt, is unwise because it shows weakness, diminishes your prestige, detracts from your dignity, and lessens you in public esteem, by forcing on everybody the conclusion that you are, after all but an ordinary person.[49]

When doctors encouraged social distancing between themselves and patients, the space between colleagues diminished because the profession became more cohesive and uniform.[50] They worked together toward professional authority and by the twentieth century consolidated that authority in the professions' institution--the hospital.

Home Care: Woman's Sphere

The old and well established habit of self-dosing persisted throughout the nineteenth century despite the gradual rise of medicine as a profession. It was cheaper and often more practical than going to the doctor. Besides, medical care was rooted in the private domestic, sex-specific, private sphere of women. Even if access to medical care was accessible or affordable, many women especially distrusted male physicians. Dr. Elizabeth Blackwell expressed this sentiment: "No woman of sensibility could allow herself to be examined by her physician without great reluctance. To many death would be preferable to the treatment to which they would be subjected."[51] Such expressions of "female delicacy" persisted throughout the century. In fact it was this same issue that provided justification for women to enter medicine and prompted many to seek medical careers.

Practicality also influenced home care. Families and individuals who settled on claims far away from towns or villages had great difficulty obtaining medical care of any kind. When help was summoned, the physician frequently arrived too late to be of aid. Arriving after deliveries of

babies, for example, was not uncommon. Dr. John Read of Tecumseh recorded occasions when he arrived after birth: "June 11, 1886 attended by Mrs. Hopkins; Aug 7, 1886 attended by Mrs. Ella Roof; Sept. 4, 1888 no one with her when child was born." In fact, between 1867 and 1905, he recorded eighty-six occasions of births before he arrived with medical assistance.[52]

Not only was distance a factor, but financial matters also contributed to the reluctance to summon professional help. Proud and independent nineteenth-century Americans were commonly reluctant to call physicians if they could not pay for their services. Those who did seek the physician often paid in kind. Dr. Read's account book included annotations of payment rendered as vegetables, chickens, calves, fence posts, and tons of hay, as well as labor such as digging potatoes for two days to pay a $2.50 debt or washing clothes for the doctor to pay a $.75 debt.[53]

Home remedies flourished, especially in rural areas like Kansas. Many examples of these medicines can be found in journals and private papers of the period. For example, the Stewart-Lockwood family recipes contained treatment formulas for neuralgia, diptheria, and an antidote for poison clipped from the Times.[54] The papers of Annie B. Sweet contained news clippings for the cure of cholera,

smallpox, and scarlet fever from the London Scalpel. The scarlet fever formula called for the following ingredients: sulfate of zinc, digitalis, and sugar mixed with two teaspoons of water. This mixture was to be taken one teaspoon every hour.[55] Not only remedies like these, but an entire array of patent medicines entered into home care. Many contained up to 50% alcohol and were very dangerous, especially to children. Others included opium, cocaine, or strychnine. The famous "Mrs. Winslow's Soothing Syrup," for example, contained morphine and sulfate, and Dr. Fowler's Teethina Teething Powders was formulated from powdered opium and applied to the gums of infants.[56] Advertisements for Lydia Pinkham's Vegetable Compound, introduced for "female weaknesses," appealed to women's fears of medical treatment, especially surgery. The company wrote in 1879 to one female customer who had a prolapsed uterus: "By all means avoid instrumental treatment for your trouble. Use the compound as you have been using it--faithfully and patiently--and it will eventually work a cure."[57]

Social and Medical Attitudes Towards Women

In order to understand female physicians' ideology in Kansas or nationwide, it is necessary to comprehend social attitudes and medical opinion concerning women. Male physicians, like everyone else, were subject to societal norms. Victorian American society was divided along gender lines into two separate spheres. Each sex had clearly defined boundaries of behavior. Women's roles reflected the ambiguous position of the image of "angel and prostitute."[58] Society expected women to preserve race, civilization, and culture and yet at the same time remain subject to male authority. Yet being accorded little more real power and dignity than a child, females actually took on enormous familial responsibilities.

Society also expected women to be weaker than men physically. Illnesses, such as weakness, invalidism, nervousness, hysterics and fainting were considered to be fashionable and products of female delicacy. Physicians assumed the social characteristics of the ideal Victorian woman--nurturance, intuitiveness, morality, domesticity, passivity and affection--contained a deeply rooted biological basis.[59] These arguments formed a system rigid in support of traditional gender-defined roles.

Charles D. Meigs, in a lecture to his students at

Jefferson Medical College, spoke on the "distinctive characteristics" of women. He explained that women elevated and civilized society; the arts, literature, and science all flourished under their spell; their smile was a propelling force that made men's achievement possible. Naturally prone to be religious, women exerted a salutary effect on society's morale, setting the tone and willingly martyring themselves for religion, country and family. "Their head[s were] almost too small for intellect, but just large enough to love." But of all their attributes, according to Meigs, the most charming was their modesty. This modesty stemmed from their natural inclination to timidity and dependence and served as one of their stronger attractions as well as one of their most powerful aids. It bound them to home and family, where they transmitted to their children those positive values that elevated society.[60] Though expressed prior to the time frame of this study, this idealized concept of delicate American women--modest, docile, submissive and gentle--generally was accepted by both men and women throughout the century. Even feminist reformers, who sought greater opportunities for women, kept their demands within the framework of "women's sphere."

Popular literature reinforced these ideas of women's innate passive qualities--docility, and inclination to be

dominated by superior males. Jean-Jacques Rousseau's pronouncement in the educational treatise, Emile, that women "ought to learn multitudes of things, but only those which it becomes them to know" contained the essence of popular thought regarding women.[61] Although written in the eighteenth century, Rousseau's ideas, like Meig's, illustrate the profound restrictive ideology concerning women that stamped male and female roles.

Psychological responses to this stress-producing situation may have precipitated physical illness for particular women otherwise unable to handle changes in family life. The burdens of housekeeping, family management, and childbearing may have overwhelmed these improperly socialized women. The hysteric, for example, purchased escape from the emotional, and frequently from the sexual, demands of life only at the cost of pain, disability, and an intensification of woman's traditional passivity and dependence. The hysterics's behavior through "passive aggression" or "exploitive dependency," often aroused a corresponding hostility in the physicians and may have precipitated unconscious male hostility in the form of drastic gynecological surgery.[62]

Changes in the nineteenth-century's social arrangements, including industrialization, the emerging middle-class standards of morality, growing awareness of

health and safety issues, increasing population, and the atmosphere of Social Darwinism, added further conflict to women's lives. Victorian education did not prepare women to be strong and able to deal with stress that resulted from a rapidly changing society. Strength was socially unacceptable. The Women's Medical Journal of 1896 addressed the rearing of daughters:

> She fails to teach her daughters aught of the responsibilities of life. Any independence of thought or action is hampered by foolish restriction...Thus the daughter in nine cases out of ten grow up without any disposition to the free development of original thought, strong body and brain, which mean steady nerves and good health.[63]

This dichotomy between dependence and responsibility in women's lives directly contradicted their role within the family as ideal mothers, and as self-reliant, efficient, and protective caretakers of the home. These factors plus social expectations and inferior education kept women in an inferior position that they in most cases accepted.

III. WOMEN IN MEDICINE: OPPOSITION AND RESPONSE

Opposition

While some male physicians began to recognize the destructive nature of female socialization in the late nineteenth century, women physicians were often the most outspoken critics of the inadequate upbringing of Victorian girls. The very elements of Victorian society just discussed, an insistance on female modesty, and delicacy, as well as the corresponding resistance of women to seek medical care, encouraged women to enter the practice of medicine. The antebellum health reform movement and the transfer of their traditional female role to the public sphere offered justification as a practical approach to improve women's status.[64] Thus the first female doctors tried to redefine womanhood to fit better the demands of an industrializing society. Women who practiced medicine, a minority in the profession, violated nineteenth-century norms for female behavior. They were ideological innovators and at the same time conservators of the past. They sought expansion of the female role, through arguments

that supported their place in the domestic sphere and at the same time fought for their right to participate in the community at large.

Opponents of medical education for women feared that those who sought professional training would avoid their child-rearing responsibilities. Conservatives also worried that teaching women the mysteries of the human body would affront female modesty. In 1867 Cornelius Logan proclaimed: "we hope never to see the day when the female character shall be so completely un-sexed as to fit it for the disgusting duties which imperatively develop upon one who would obtain proficiency, or even respectability in the healing art."[65]

In 1870 Frank Leslie's Illustrated Newspaper published the comments of the president of the American Medical Association, Dr. Gardner, concerning the entrance of women into medicine. Women's separation from the "horrors of medicine," he claimed, was both a privilege and the inevitable result of their psychology:

> More especially is medicine disgusting to women, accustomed to softness and the downy side of life. They are sedulously screened from the observation of the horrors and disgusts of life. Fightings and tumults, the blood and mire, bad smells and bad words, and foul men and more intolerable women she but rarely encounters, and then as a part of the privileges of womanhood, is permitted, and till now, compelled, to avoid them by a not, to her, disgraceful fight.[66]

Another argument against women entering medicine was

physicians' fear that the influx of women would alter the image of the profession by feminizing it in unacceptable ways. Few physicians were ready to surrender their masculinity. Critics expressed concern over the economic impact that women in a profession would have in a profession already thought to be over-supplied. National and local medical societies denied admission to graduates of orthodox female medical colleges. The Kansas Medical Society admitted a woman, Dr. Francena Porter, in 1872, four years before women were allowed a seat in the national organization. Respected educational facilities also refused them admission to their programs. Opponents alleged inferior education as the most frequent argument against their admittance to the profession. The majority of female physicians' opponents were neither scientific in their arguments concerning female physiology nor consistent about their abilities. They praised women's ability to nurse, but rejected their competence in medicine. Despite counter arguments, many women did receive excellent training at regular women's colleges.[67] Most noted were the Women's Medical College of Philadelphia, the New York Infirmary, the Women's Medical College of Baltimore, and the Women's Medical College of Chicago. Women students were educated primarily in seven key states: New York, Pennsylvania, Massachusetts, Maryland, Illinois, Michigan

and California. These seven states educated close to half of all regulars in the period 1890-1913 and over 2/3 of all women in medicine. (See table 1 & 2).[68]

Table 1: Percent of Women Students in Seven key States

	1890	1895	1899	1905	1910
# females in 7 states	529	563	760	587	413
total female regulars	648	889	1063	835	573
% females in 7 states	81.6%	63.3%	71.5%	70.3%	72.1%
% of all students in 7 states	52.3%	50.1%	47.9%	46.5%	47.9%

Table 2: Women in Women's Medical Colleges in Key states

	1890	1895	1899	1905	1910
women in women's med. colleges key states	391	417	323	191	137
% in women's med. colleges	73.9%	74.0%	42.5%	32.5%	33.2%

Table 3: Women Who were Regular Physicians

	1890	1895	1899	1905	1910
% of all women who are regular	75.9%	66.4%	74.0%	76.5%	81.0%

("Women in Medical School 1890-1917,")[69]

The data of the tables are significant for several reasons. They illustrate that half of all women in medical education were primarily in women's medical colleges, in clustered areas of the country. The high percentages of women enrolled in a few states, in women's medical schools, explains the disproportionate decline in female students when these schools closed. There were whole sections of the country, particularly the South, that remained largely closed to women's medical education. Since women regulars were being educated in a relatively small number of schools, the fate of these few schools had a greater impact on women's medical education than the closing of a few schools had on men's. One half of the six Kansas physicians studied for this project were educated in these cluster states. These figures dispel the argument that women who entered medicine were educated at inferior

institutions, since except for the early 1890s, over 70% were educated at recognized regular schools. (see table 3).

One group of critics in the 1870s and 1880s developed an argument based on biological factors. They utilized the book entitled Sex in Education: A Fair Chance for Girls published in 1873 by Professor E. H. Clarke of Harvard. It depicted menstruation as mysteriously debilitating and higher education of any kind as sapping the energy needed for normal development of the reproductive organs. The results of higher education, according to Clarke, particularly college education, were those "grievous maladies that torture a woman's earthly existence: leukorrhea, amenorrhea, dysmenorrhea, chronic and acute ovaritis, prolapsis uteri, hysteria, neuralgia and the like."[70] This biological argument proved perplexing to advocates. Though not a direct critic of female physicians, Clarke reinforced popular prejudices against higher education for women. Because of the article's significance in support of medical notions about women's illness, it was widely circulated in medical journals of the period.

Thus it is clear that women's acceptance of their restrictive domestic sphere supported their connection to medicine in the community at large from their point of view. Yet their actions threatened contemporary prejudices

about appropriate female roles. Critics argued against female professionals by using biological, social psychological and intellectual arguments, but women skillfully countered each of them.

Response

Female Physicians: The Necessary Solution.

Despite the popularity of arguments against female practitioners, supporters of female medical education discovered that the one in favor of respect for feminine delicacy could be turned around so as to work to their advantage. Was the mother who cared for ill family members shielded from indelicacies? If female modesty was the issue, then why should men be permitted to administer examinations to female patients, particularly pelvic exams? As pelvic exams became more ordinary, advocates argued, male physicians certainly posed a greater threat to female delicacy than women practitioners. Indeed, the rise of such elaborate exaggerations about womanly delicacy led some social conservatives, and feminists alike, to view the training of female physicians as "a necessary solution to the problems arising from female reluctance to disclose

symptoms to male practitioners."[71] It was the hope of many female physicians that medical training for women would elevate the entire sex, which some felt was becoming more frivolous, weak-willed, and self-centered.

Popular biological arguments denounced women as physicians due to their once-a-month incapacitation. Critics questioned if they ever would be depended upon in medical emergencies? One of the most effective counter arguments to disprove this argument and the necessity of rest during menstruation, for example, was Dr. Mary Putnam Jacobi's essay, "The Question of Rest for Women During Menstruation." Submitting her article anonymously, according to protocol, to the Boylston Essay competition of Harvard Medical School, she won the prize for 1876. The study challenged conservative medical opinion on the subject through the use of statistical analysis and case studies although it generally was not widely noted since it challenged social prejudices. She concluded that there was no necessity or even desirability of rest during menstruation.[72] Female physicians themselves helped to dispel doubts by functioning skillfully in their lives.

Supporters of women's medical training often avoided questions of female intellectual capabilities. Instead they emphasized womens' "natural" nurturing capacity. Most interesting about the thinking of these female physicians

was the way their attitudes toward their own sex mirrored those of their male counterparts. For example, women advocated medical education on the grounds of propriety and morality as a natural extension of women's sphere. Medicine, they noted, suited the female character that was expected to be self-sacrificing and empathetic. They used this same criticism to justify their arguments. They believed that women's "nature" uniquely qualified them to treat specific female illnesses.

Female Physicians and Scientific Developments

The entrance of women into the medical profession in the nineteenth century was integrally connected to traditional roles. Most women at that time who sought medical education, believed that women should enter public life because of the unique contribution only they could make. They sought a closer connection betwween the traditional sphere of the family and the larger public sphere. They believed women belonged to the medical profession by virtue of their natural gifts as healers and nurturers. Medicine appeared especially suited for women because it combined the alleged authority of science with a dedication to alleviating suffering that seemed inherently female. To the supports of women's entrance into the

profession, the fact that women would bring cooperation, selflessness, nurturing, purity, and social concern to their work was the strongest possible justification for women in medicine. They each believed their decision to be a physician was a perfectly legitimate choice. Also with the period threatened by an alleged moral depravity of industrializing society, unprepared for poverty and disease, women seemed especially suited to teach principles of family health and hygiene to protect and soothe the public.[73]

Women's special contribution to medicine would raise medical practice to its highest level. As the "handmaids of nature," women expected to challenge therapeutics directly. They would place greater values on the "natural system of curing diseases...in contra-distinction to the pharmaceutical." They would promote a "generally milder and less energetic mode of practice."[74]

Other forces in the last third of the nineteenth century resulted in standards distinctly different from, and often at odds with, "female" values. The differences between new scientific principles, particularly in bacteriology and immunology, contradicted the position of the first generation of female physicians. These bacteriological principles brought into question the older view that understood disease as a violation of the natural

order. In this point of view, medicine's task was to reveal and teach the laws by which people could maintain the proper balance between environment and individual behavior. The bacteriologist obscured "the higher facts of consciousness," according to Dr. Elizabeth Blackwell, because bacteriology "appeared" to develop at the expense of sanitation, hygiene, preventive medicine, and most important, morality itself. By equating disease with specific microbial invaders, laboratory scientists threatened the work of these reformers who supported sanitary measures to remove what they perceived to be the filth, want and pollution that they believed caused disease as a result of an imbalance between the environment and moral choice. It caused a rift in women's connection to medicine through her traditional role. "Not laboratory experimentation," dissented Blackwell, but "pure air, cleanliness and decent house-room secured by all...[will] form the true prophylaxis of small-pox."[75]

As Blackwell continued to explore her understanding of the implications of the new science, she turned to the role of women in the profession. Because she believed that women innately exhibited a higher moral sense of right and wrong than did men, she saw the role of medical women as essential to the proper and healthy progress of the profession as a whole. Therefore women physicians, she

argued, must monitor medical progress so that it did not violate moral truth. It was the moral guiding the intellectual where women's influence proved most beneficial. Bacteriology with its implications for vaccination undermined the sense of moral order to Blackwell and others. It represented a triumph of the intellectual over morality. The absence of morality, they believed, as a consideration in therapeutic treatment, led ultimately to the practice of treating the poor, helpless patient with indifference, by regarding them as mere clinical material. It was women's duty to oppose this narrow materialism which in her mind, the laboratory represented. Specifically Blackwell and others of like mind opposed vivisection, particularly the surgical removal of female genital organs. Such surgery represented mutilation and was especially heinous because it rendered women incapable of having children.

In contrast, to Dr. Blackwell, Dr. Mary Putnam Jacobi, approached scientific medical knowledge as something independent of morality in the 1880s. She joined other women in supporting such reform efforts as women's suffrage, and educational reform in the direction of manual training and physical culture. However Jacobi viewed scientific research as absolutely good because it added to the fund of human knowledge. The chief task of women in

medicine, according to Jacobi, was not to foster morality, but to create a scientific spirit among them.[76] To Jacobi, women in medicine should not be separate from men in the profession. They should act as individuals united with men in the search for truth. She did not concur that women's unique skills were the only rationalization for their place in the profession. To her there was nothing earth-shattering about women competing with men. Likewise women should not specialize in the fields focused on female health within the profession, but rather they should be fully integrated in the full field of medical practice. She told the graduating class of the Women's Medical College of the New York Infirmary in 1883: "Forget that public opinion continued to assign you to a special and on the whole, inferior position. Acclimate," she implored, "as quickly as possible to your new place."[77]

A central theme, then, in medicine has been the tension between femininity, and morality on one hand and masculinity, professionalism, and science on the other. This issue divided women physicians in particular, and men as well. These two women, Blackwell and Jacobi, represented different approaches to the "problem" that women in medicine posed. A society that emphasized women's maternal role questioned their right to pursue professional goals. Did women have a right to pursue goals usually

considered masculine, not only vigorously, but for the same reasons of self-interest and personal fulfillment as their male colleagues? Were women's goals of equality legitimate, or should they challenge male values by asserting unique feminine characteristics? As female professionals, these women struggled with such questions.[78]

Medical Explanations of Female Diseases

Pre-scientific physicians theorized that women's physiology was starkly different than that of men. The female skeleton was frailer, the skull smaller, and the muscles were more delicate. Prone to over-stimulation, the female nervous system produced more irritability and resultant exhaustion. According to a physician in 1870, it was "as if the Almighty in creating the female sex, had taken the uterus and built up a woman around it."[79] Medical explanations for such female disorders had inexorable connections to female sexuality.[80] These and similar arguments reflect the restrictive socialization of women and help to explain why some asserted themselves and entered the medical profession. They sought expansion of inferior social positions and rejected popular medical

explanations such as reflex-irritation that "explained" their "unique illnesses." They believed many other factors, particularly inadequate education in physiology and inappropriate socialization contributed to the causation of female physical illnesses.

Popular explanations from most practitioners concerning women's illness connected ailments in virtually every part of the body to what was thought to be uterine disease. This included, for example, paralysis and headaches. In contrast, physicians claimed that the male reproductive system held no parallel degree of control over physical illnesses. Women were thought to be driven by their cyclical reproductive system, bounded by the polar crisis of puberty and menopause.[81] Such views had been familiar to practitioners in the Western World since antiquity. But between 1840 and 1890 physicians presented new elaborate explanations of the relationship between women's peculiar sicknesses and their reproductive system.

The ovaries, in particular, physicians claimed, imprisoned women's lives. One explanation condemned them for imprisonment of women's lives. "Ovulation fix[ed] women's place in the animal economy....with the act of menstruation [was] wound up the whole essential character of her problem." The two little glands' influence affected and dominated women's systems. "Either an excess or

deficiency of the proper influence of these organs over the other parts of the system may be productive of disease," stated Dr. J. H. Kellogg in 1895.[82] Such assertions represented medical opinions relating to the ovaries that some female practitioners rejected.

Many male doctors assumed that the uterus, like the ovaries, was connected to the central nervous system and that shocks to it might alter the reproductive cycle. This intimate and hypothetical link between ovaries, uterus, and the nervous system formed the logical basis of the "reflex irritation" model of disease causation. This concept proved popular in the middle to late nineteenth-century texts on psychiatry and gynecology. Accordingly, any imbalance, exhaustion, infection, or other disorder of the reproductive organs could cause pathological reactions in seemingly remote parts of the body. "These diseases," one physician explained, "will be found, on due investigation to be in reality, no disease at all, but merely the sympathetic reaction or the symptoms of one disease, namely a disease of the womb."[83]

A number of treatments, including the rest cure, were employed to treat the symptoms of the so-called diseases of the womb. The rest cure, developed by prominent neurologist, S. Wier Mitchell, placed a woman on prolonged bed rest. It encouraged over-eating, total isolation,

massage, electric treatments, and a reverent attitude toward the doctor. All of these elements were considered to be important elements of the cure. Charlotte Perkins Gilman, an early twentieth-century novelist, reformer, and former patient of Mitchell, wrote a criticism of his treatment in her fictional and autobiographical work, The Yellow Wallpaper. The central character's hostility toward her husband and child was treated by her doctor as a nervous disorder that resulted in her madness. Though not a physician, Gilman recognized that women's dependent position rather than their pelvic organs, was at times the source of their illnesses. The cure treated women's sociological problems as physical ones, classified as "nervous," due to reflex-irritation from the reproductive system. Since physicians regarded women stricken with illness as being out of their proper place as mothers and wives, the intent was to bring them back to their senses and to their designated roles.[84]

Zu Adams, member of a prominent Topeka family, received a rest cure treatment in 1890 for her stomach ailment caused by reflex-irritation. Therapy administered for her "sour stomach" also included treatments for presumably connected uterine problems. She traveled to Battle Creek, Michigan, to Dr. Kellogg's sanitarium, where she received a series of therapies composed of massage

treatments, exercise, medication, electric therapy, water treatments, rest, and whole grain food. Miss Adams also listened to lectures by the doctor on topics such as constipation, nutrition, the liver, the womb, and cheerfulness. Dr. Kellogg, a regularly trained physician and recognized health reformer, tended to adhere to the principles of the reflex-irritation model of disease.[85] Dr. Kellogg's assistant, a female physician named Dr. Lindsay, reported to Miss Adams that she would need at least two additional months of specialized treatments to cure her "terrible chronic inflamed ovaries" and recommended a change in her daily regimen.[86] Three weeks later Adams reported to her father, that Dr. Kellogg had been treating her "ovarian trouble with electricity three times a week at a cost of $1.00 per treatment. This...means of electricity, [is] quite severe."[87] She did not describe her electrical therapy further, though she did elaborate about her water treatments which consisted of:

> a dry flannel wrapper, a spine bag laid right under [the] spine for five minutes, then [the] spine [was] rubbed with ice. Another way [was] a flannel mummy out of hot woolen and wrapped about a rubber bag-like placed on [the] stomach for ten to fifteen minutes. After this [I was] taken to another room and had a sprinkler turned on [me] warm and then cold until all [the] goose-pimples stuck out.[88]

Her many treatments were quite expensive requiring weekly $14.00 for her room, $3.00 for the doctor, and $3.00 for

massage. The electric treatments added $5.00, for a total of $25.00. Apparently Adams had some measure of cure, as she reported that her menses and her appetite returned. She had gained fifteen pounds of weight upon her return home.

Dr. Art O'Donnell of Junction City, Kansas, who attended the University Medical College in Kansas City in 1898-99, recorded in his classroom notes a prevailing thought about uterine disorders: "Women who have uterine trouble are predisposed to asthma conditions."[89] O'Donnell's professor Dr. Adams' lectured in a course on gynecology indicating that: "slight hacking cough[s] that [do] not respond to constitutional methods [were] due to irritation of the uterus or ovaries transmitted by reflex."[90] Adams noted that "pain all over the body is as a rule hysteria which is the nature of stretching of muscular fibers due to the uterus expelling something."[91] Spasms, either tonic or chronic were caused in part by sexual excesses.[92] These notions represented the common medical understanding about the relationship of the uterus and ovaries to other bodily afflictions.

A second common theme specific to women's illness was the assumption that many illnesses resulted from the imbalance created by certain moral choices and sexual activities viewed as depraved. Doctors believed that these

unnatural behaviors harmed the female's physiological systems and therefore induced diseases. Masturbation, birth control, sexual excesses, and sexual repression are examples of the assumed causes of female illness. Medical opinion held that sexual excesses caused uterine inflammation, ulceration, leukorrhea, deranged menstruation, miscarriage, barrenness, debility, hysteria, and an endless list of nervous and other disorders. Masturbation, recognized as the "master vice" of the period was regarded as the source of a variety of ills ranging from tuberculosis to myopia. Birth control, referred to in 1880 as the "American sin of faithless wives," was denounced by the American Medical Association as an illicit practice.[93] Though some physicians defended a woman's right to limit childbearing, many doctors and clergymen emphasized the unnatural and thus deleterious character of any and all methods of birth control and abortion. Even coitus interruptus, a common method of birth control, was attacked as a source of mental illness, nervous tension, and cancer. It was easily understood through the "reflex-irritation" explanation as follows. Sex, physicians claimed, like all human bodily activity, involved an exchange of "nervous energy." Without the discharge of accumulated energy released at orgasm, the nervous force would accumulate and concentrate. Dangerous levels of this

undischarged energy led ultimately to a progressive decay in women's physical and mental health by reflex. Sexual excesses led to nervous exhaustion. These indulgences resulted in lustful impulses in both partners, owing to the availability of such mechanical birth control devices as condoms and diaphragms which were available by the mid nineteenth century, but whose use was rejected by physicians. The resulting conditions, as inevitable consequences of "reflex-irritation," included memory loss, insanity, heart disease, and nymphomania.[94]

In 1901 Dr. L. L. Uhls of Osawatomie, Kansas, attributed insanity to a variety of causes including sexual excess and masturbation.[95] The Journal of Obstetrics and Diseases of Women and Children reported that attacks of hysteria were "the result of reflex irritation."[96] In the same journal, Dr. A. W. Edes argued that "the prevalence of sick headaches, often extending over many consecutive years, [were] due entirely to some uterine disorder." The ailments that he related to uterine problems included morning sickness, uterine epilepsy, dysmenorrhea, asthma, neuralgia, chorea, asthenopia, pathological conditions of the eyes, aphoma, spasm of the glottis, and the sensation of choking.[97] Two years later this journal carried an article by a Chapman, Kansas, physician, J. Milne. Citing masturbation as a secret vice that was more prevalent in

women than in men, he contended the practice to be an etiological factor in the production of gynecological disease.[98] Physicians frequently argued against allowing women to ride bicycles, since sitting on the bicycle seat would precipitate masturbation.[99]

Milne continued. He argued that masturbation would produce a spreading of the labia majora due to an enlarged clitoris, alteration in the color of the external genitalia, and a relaxation of the vaginal opening. He also cited an "outpouring of negative and evasive statements upon close questioning" about sexual activity, as symptoms of masturbation.[100]

Another theme in medical literature about female illnesses was education. Many physicians were convinced that education composed a major factor in bringing about the observed physical deterioration of women, especially during puberty and adolescence. During these years, the female reproductive system matured. Thus girls' energies needed to be devoted to reproductive development. Vital force spent on education, these physicians claimed, caused women's reproductive development to suffer. They then were diverted from the calling of true motherhood, which in this context was understood to mean the bearing and rearing of children as well as the functioning as wives and homemakers. Another theory explained that the result of

this expenditure caused weakness, nervousness, and perhaps sterility in females who could therefore only bear feeble, neurotic, and degenerate children. In other words, the brain and ovary could not develop at the same time. "Why," one physician asked, "spoil a good mother by making an o^P ordinary grammarian?"[101]

The medical community emphasized that it was the female's physical condition that shaped her offspring. Unhealthy activities like education and masturbation might result in a woman's failure to bear healthy children. The Journal of the Kansas Medical Society published an article in 1902 on the effects of the public schools on pubescent girls. The author stated that the "health, happiness, and usefulness [of a girl] depend[ed] so very largely upon the degree of physical perfection to which she attain[ed]." Disorders during pubescence, such as menstrual, nervous, or nutritional derangements, indicated something was wrong either in the patient's physical makeup or in her surroundings. A young girl should never be taxed to full capacity in any work, either mental or physical. Intellectual development could wait for the physical. If a girl had a well developed muscular system, good digestive organs, a sound heart and normal lungs, physicians deemed she would be better equipped to undertake the duties of life, than if she were highly educated.[102]

Psychological and cultural factors also influenced female illnesses. To some extent sickness was expected and considered to be fashionable in women.[103] Medical writers between 1840 and 1900 asserted that a large majority of women were in some sense ill.[104] Ill health had become fashionable. After all, what woman wanted to admit to so crude a claim as "robust vitality?" To feign ill health was to attest to genteel sensibility, and sometimes to escape pressing demands of the home and sexual responsibilities.[105]

All of these theories concerning the cause of female illness--uterine causation, poor morals, and excessive education--attested to the cultural context within which physicians thought and worked prior to general acceptance of the new scientific causation models. They were prisoners of their own medical theories and Victorian sex norms. Using these premises, physicians developed hypotheses for treatment then known as heroic medicine.

Heroic medicine utilized doses of many dangerous substances, heavy bleeding, and leeches as popular treatments for females. The vaginal and cervical areas were leeched, and often the cervix was cauterized with hot irons or silver nitrate solution to treat venereal disease and other female complaints. Drastic surgical procedures, such as clitoridectomy, oophorectomy, and hysterectomy,

removed the female genitalia and reproductive organs. These procedures flourished in the antebellum period and beyond between 1880 and 1910.

IV. FEMALE PHYSICIANS: IDEOLOGICAL INNOVATORS, AND CONSERVATORS OF THE PAST

Oh who is this who casts her rose of youth
  Beneath the feet of praise,nor fancieth,
The life of her ladyhood in sooth
  Too white to bloom beside the couch of death.

It is the woman healer her who stands
  With tender touch upon the cruel knife,
With thought er graven brow and skillful hands
  And yearning heart, to save the house of life.

Bless her O woman for it was your call
  The agonizing cry of your distress
That urged her outward from the cloister
  To make the burden of your misery less.[106]

Women in Kansas and nationwide who sought medical education responded to ideology that prompted them into public life predominantly because of the unique contribution they, as women, could bring to medicine, particularly utilizing their "natural gifts" as healers and preservers of morality. They also responded to what they deemed to be erroneous medical practices performed on females. Most of the first women in medicine viewed themselves both as protectors of the morals of humanity and as saviors of all women from the hands of practitioners who utilized drastic treatments on them. The editor of the

Women's Medical Journal declared: "the world will soon recognize that women in breaking away from old conditions are breaking down barriers that will benefit humanity"[107] According to the same editor, female doctors needed to realize that they were doctors, as well as ladies:

> She has in a measure been a purveyor of morals as well as of health and the demands of humanity is constantly increasing...It is difficult for her to realize that she is a doctor as well as a lady and that in the exigency she must wear the double gown but if she can keep this in mind all will be well. By maintaining a purely professional attitude, never for a moment laying it aside, she will construct around herself a wall of reserve that cannot be shocked nor sundered.[108]

Arguments in favor of female practitioners were almost always expressed in connection with the theme of domesticity, the idea that the female protected humanity's morals. Part of the argument contained the idea that women had a special role in the care of other women.[109] An advertisement in the Women's Medical Journal reflected this belief. It read: "What can women doctors do? Everything in medicine that a man can, but their natural field is gynecology."[110] Gynecology, reported Dr. Mary A. Whery, had become the special provence of medical women as a "natural sequence." She went on to explain that once the novelty of women as practitioners had disappeared, women would largely become clients of female doctors for treatment of their diseases.[111] Most female practitioners

and patients believed that their role pertained particularly to the treatment of women. Dr. Lillian G. Towslee, the editor of the gynecological department of the women's journal, quoted her own professional article: "gynecological work is woman's special sphere, and as [a] gynecologist, she's pre-eminently successful. Many women, not all, dislike being treated by men for uterine troubles. There are women who suffer from year to year simply because they will not consult a man."[112] Even if a woman practitioner chose not to be a gynecologist, she was expected to be one by her patients, according to Dr. Maude J. Frye: "Whether you intend to be a gynecologist or not, every woman who enters your office expects you to be."[113] This suggests support for the theory that women's entrance into medicine was an effort to assert their rights in society at large as an extension of their domestic role and as a reflection of feminist precepts.

The Crusade for Female Health Care

When women gained access to medicine, some joined a crusade for specific changes in women's health care, especially in educational reforms, as preventive gynecology, and in alternate approaches to health problems.

In 1909, the Women's Medical Journal acknowledged that female physicians had been identified with the teaching of hygiene and public sanitation from the time they began the practice of medicine in this country in 1840 and 1850. One of the first things the pioneer Elizabeth Blackwell did after opening her office in New York City was to present a course of lectures on the "Physical Education of Girls." The Women's Medical College of the New York Infirmary, founded in 1865, established a professional chair for the subject of hygiene and public sanitation.[114] In connection with this they acknowledged their special role with women and children. Female physicians sought to educate women and mothers, who, they believed, desperately needed instruction in sanitation, hygiene, and their own physiology.

Many women who practiced medicine believed their contribution would improve the quality of life for the female community. The doctors Blackwell (Elizabeth and her sister Emily) claimed that

> those women who pursued this life of scientific study and practical activity, so different from women's domestic and social life, yet so closely connected to it, could not fail to regard their avocation (housework) from a fresh standpoint, and to set in a new light, the noble possibilities which the position of women [in medicine] open[ed] to [them].[115]

Dr. Frances Rutherford stated in 1893 that she believed female doctors were needed everywhere that poor,

helpless, ignorant women were found.[116] Another contributor to the journal expressed these sentiments succinctly four years later. "We are better women for the knowledge of humanity which our work has given us. May we hope that humankind will be the better, too, for our having wrought!"[117] These successful new female physicians concerned themselves with issues of preventive medicine by promoting female education, both physical and intellectual. They likewise supported alternatives to standard gynecological therapy since they believed physicians unnecessarily resorted to radical surgical regimens. They supported these issues because they believed they were physicians by virtue of their natural gifts as healers and nurturers, and as such seemed especially suited to teach prevention and protect and sooth the public, particularly other females. This philosophy was two-sided in its context. To advance themselves into the public world in order to utilize their feminine traits was stepping out of their traditional sphere, yet at the same time supported societal belief about the domestic sphere and the explicit contribution that women were believed to bestow on humanity.

The Crusade for Appropriate Female Education

When female practitioners criticized Victorian women's education, they claimed that girls grew increasingly frivolous, weak-willed, and self-centered because of the socialization to which they were subjected. They exhibited a "passion for dress and company...until these have become the staples, rather than the stimulants of their lives."[118] As early as 1856, Dr. Marie Zakrzewska raged: "Oh, I scorn men, sometimes from the bottom of my heart. Still this is wrong for it is the fault of the women, of the mother[s]--in educating [their] daughter[s] to be beautiful machine[s] fit to ornament fine establishment[s], not gaining this there is nothing left but wretchedness of mind and body."[119]

Essays on women's educational deficiencies frequented the pages of the Women's Medical Journal. Dr. Belle Craven wrote: "Every structure and tissue must be exercised, and this applies to the ciliary muscle of the eye as it does to the great flexors of the leg. If the intellect is to be cultivated, the brain must be exercised."[120] Dr. Harriet Garrison argued: "Women's brain, [sic] whatever its capacity, must be made to hold a certain amount of book lore which we call an education."[121] The lack of appropriate education available to women contributed to

physical illnesses according to these females around the country. Another article recommended abundant outdoor exercise and education in sexual physiology as prophylaxis. It also warned particularly of the dangers posed by males who harbored gonorrhea.[122]

Support for sex education as a preventive measure appeared regularly in literature written by female physicians. Dr. Laura J. Leibhardt, for example, wrote: "the modern school girl is not the helpless fragile person that some invite us to believe. Her school curriculum need not differ from boys'. Teach her it's not folly to be wise and increase her regard for her own body by means of correct instruction in physiology and hygiene."[123] Mothers were guilty of great neglect in not telling a girl when she neared the time of puberty about the physiological facts of menstruation, according to Dr. Grace Peckham Murray, a New York physician.[124] A girl should know at least enough of her pelvic organs as would be necessary for the preservation of health declared Dr. Jeannette Wallace.[125] The cause of ill-health in university girls permeated from the poor hygiene permitted by their mothers in the early school days. Also affecting health was the lack of preventive medicine taught by physicians in homes when they attended children.[126] "Much disease," voiced a practitioner, "is propagated by ignorance, indifference,

and carelessness, and the only way to overcome this is by personal education and the education of public sentiment."[127]

Many women who were physicians called for participation in educating the women of their communities. Dr. Edith Fosnes proposed specific topics that female physicians should address by means of delivering local talks and lectures to mothers. Her proposals included the subjects of baby care, water supply, cleanliness, contagious diseases, sexual physiology, masturbation, abortion, venereal diseases, and moral standards as essential for female education. Female physicians could give lectures and talks in places like women's clubs, which were not open to males.[128]

By 1909, the American Medical Association had joined the crusade advocating that female physicians promote preventive medicine. It passed unanimously a resolution in support of the activity.

> Resolved, that the women physician members of the American Medical Association be, and they are hereby requested to take the initiative individually in their respective associations in the organization of educational committees to act through women's clubs, mothers' associations and other similar bodies, for the dissemination of accurate information teaching these subjects among people, and that they be requested to submit to the House of Delegates a yearly report of such work, and that a committee be elected from among their members to take charge of the same.[129]

In an editorial the Women's Medical Journal commented

on this and the work of organized hygienic committees at the state level. It claimed that "the field of activity and usefulness opening to the skilled and broad-minded woman physician are practically limitless.[130]

Female reformers also struck out against claims that higher education "tended to deteriorate women's ability to bear healthy off-spring [sic]." They claimed in contrast that higher education would not interfere with well developed, strong offspring. On the contrary, it would aide the production of healthy children. "Developing the higher instincts in women...to enlarge [their] ideas, to strengthen [their] minds...to its fullest capacity...must tend to have the opposite effect...This training and cultivation must have a beneficial effect on her [sic] off-spring." In every instance of unhealthy children, Dr. Sophie Hartley argued, the cause must be traced to results other than mental development--to causes which never would exist if higher education for women were universal.[131]

All these physicians supported educational reforms as a reflection of what they believed was an extension of their domestic role as protectors and saviors of women. They believed that female socialization played an important role in female health. They challenged traditional educational practices that propagated ignorance and carelessness and that promoted the continuation of disease

that could be prevented with proper instruction. They placed responsibility for appropriate education directly in the hand of physicians, both male and female.

Appropriate Female Education: Kansas Female Physicians

Three of the six female physicians in Kansas explicitly paralleled the sentiments of their counterparts on the issue of educational reform. Dr. Deborah Longshore spoke in favor of changing educational custom by advocating the teaching of science in the public schools for both sexes. The responsibility for application of preventive measures, declared Dr. Longshore, belonged to women and was thus a vital element in their education.[132] Like her female counterparts such as Dr. Liebhardt, Longshore represented feminine medical opinion that questioned claims that education was a derogatory influence for women. Not only was education in female physiology, in particular, believed to be beneficial to female health, it would elevate all women to be better mothers and household managers.

As a respected member of the Topeka community and the medical profession, Dr. Longshore often spoke to the laity and the profession in support of women's responsibility in

general health care. She believed that in order to accomplish this, women needed improved education in health. "I wish [women] would use their brains more and their fascinations less," she declared.[133] Implementation of scientific education for children (including girls), she suggested should begin in the lower grades of the public schools. "Woman's advancement is a part of civilization," she argued. "She will know and understand ... as she is made to know her responsibility in the matters of general health."[134] As long as women do not understand the principles of hygiene, she explained, the laws of health will not be practiced. Men criticized women for their lack of knowledge on many topics yet expected them to manage the household economically, comfortably, and healthfully. When women understand the necessity of health rules, then they will willingly support them, declared Dr. Longshore. She made these statements before the second state sanitary convention in 1888, reportedly as the first woman to read a paper to that organization. Similar to Dr. Fosnes in the women's journal, Dr. Longshore spoke on specific topics within the Kansas community. She met her own challenge to be responsible to teach "helpless and ignorant" Kansas women. Dr. Longshore fulfilled the ideal of the special role of female physicians in the care of women.

Frances Storrs also spoke in support of education for

women. Storrs claimed they were ignorant in regard to their own vital processes, and this was largely responsible for the prevalence of uterine disease. During the term of her faculty appointment, Dr. Storrs advocated female education. Women, she proposed, need a thorough training in anatomy and physiology, beginning at an early age to prepare for the advent of menstruation. From fourteen to twenty, the aim of education for young women should be toward physical perfection. This would be accomplished by systematic exercise in the gymnasium and out-of-doors. The study of gestation, parturition, the development of the embryo, and development of infants and children should be provided continuously to females. Women in higher education, she postulated, would be glad to exchange part of the study of Homer for some facts about life and health.[135]

Dr Storrs literally called for sex-education in combination with increased physical exercise and fresh outdoor air. Reading her paper before the East Kansas Medical Society at Kansas City, in October 1894, Dr. Storrs strongly protested the failure of the medical community to endorse physiological education for women in the developing years. In a subsequent presentation on medical education, she claimed that it was not just the study and application of medicine to suffering humanity, but rather consideration

of the human element that involved the entire being. Her philosophy proposed improvement of lives by preventing problems rather than just curing them once illness occurred.[136]

Her comments illustrate the fear and challenges that the new scientific understanding brought to female physicians who justified their places in medicine as an extension of their domestic roles through application of the special feminine skills.

> Is there not a danger lurking in the perfection of technical training, in this flattering ability to classify men's ailing and give them names and the right proportion of approved and properly prescribed drugs? Is it not true that the tendency of much of this so-called education in medicine is to make of its practice a trade, rather than a service to man? Is it not true that this very training which exacts the minute and magnifys [sic] the little things is narrowing our conception of the office of him who would stand as a healer of the people, and is making him lose sight of the larger factors and influences of life? The practice of medicine has a deeper meaning than the recording of brilliant series of cases... The great hospitals are doing a mighty work, but the student or practitioner protected by their walls should remember that he has not learned while there to walk alone....When he goes forth it is the individual who he faces....That student who would grow into the knowledge of the art of medicine cannot afford to lose sight of any of the great questions of life....Nature would be his greatest teacher and truest friend....Is it not far more important that a man be helped into a better way of life than he be temporarily saved from death?...Medicine is broad enough to embrace every influence, every agent which tends to restore body, mind or soul from abnormal to normal activity--every aid in that natural adjustment.[137]

Here Dr. Storrs eloquently expressed the conflict she

sensed between the new science, which she interpreted as a danger that ignored treatment of the whole person. Medicine to her was evolving into a trade rather than a holistic art. It threatened the "office" of the physician whose duty she believed involved the "larger factors of life"--the moral responsibility to the patient. This moral responsibility required education of the "ignorant," so that they might be assisted into a better life and adopt that which is "natural" to a person's existence.

Like Dr. Storrs, Dr. Ida Barnes campaigned for improved health education for women. She emphasized the advisability of instructing women about their own bodies. As a physician, she advocated that it was the doctors' responsibility to educate women. "The greatest impression is made by the physician in his office...the painstaking physician, who will diligently search for knowledge, and carefully weigh the evidence, [will] thus prepare the way for preventive medicine, and thereby [will] lengthen the average life."[138] She claimed the accidents of maternity and contracting venereal diseases were not the etiologic al factors of ill health in a large portion of women suffering from some lesion of the pelvic organs. These problems were due largely to ignorance. In order to remedy existing conditions, she proposed "the education of the community in the laws of health, including the general principles of

ventilation, out-of-door exercise, proper food, pure water, good sanitation, [and] physical culture."[139]

While healthy parentage certainly proved advantageous, Dr. Barnes explained that the adherence to the laws of health waxed preeminently important. "If we are to have strong women it is important that the baby girl grows well, and as she develops, only such burdens shall be imposed as shall secure an even progress of both mind and body."[140] She advocated, in addition to fresh air and outdoor exercise, "the establishment of courses of physical culture in all schools and grades...as a part of the regular work of each day....The end [result] shall be that not only the health of the individual, and of young women in particular, [will improve], but also the welfare of the nation."[141]

In a presentation on the subject of abortion before the Western Association of Obstetrics and Gynecology meeting in Omaha, Dr. Barnes reiterated the importance of education in the tradition of the health reform movement, emphasizing the primary role of the physician:

> Women may be more strongly impressed by a greater knowledge of the diseases entailed [with abortion]. ...The only successful method of inculcating proper knowledge, is to instruct mothers so that they will utilize more distinctly their duties to themselves, and to their children,...concerning the functions of the generative system and of the disastrous results of abuse and crime in this direction....I am persuaded that such knowledge would make better women, who would make better mothers, who would endure the discomforts of pregnancy with greater fortitude and more joy of the anticipation for the possibilities of

> the coming generation, while no stain of meditated crime would blight their souls.[142]

No one could provide this education better than the physician, according to Dr. Barnes. She suggested that their responsibility did not end with a refusal to become active in "criminal abortion," because a woman in despair of another pregnancy might seek someone of unscrupulous manner. Considering the willful destruction of the fetus as a crime, Barnes argued in favor of giving women a greater knowledge of "functional activity." "So many young women...proudly declare that they know nothing about the organs of generation." She claimed that women "should understand something of the function [of sexuality] before contracting for functional activity."

Barnes viewed abortion as a violation of traditional ideas of the balance necessary to maintain health. Abortion violated morality, since it was the physicians' responsibility to teach that which defiled equilibrium and thus led to illness, Dr. Barnes protested against any but spontaneous abortion, as a breach of the proper balance that she was trained to try to maintain as a physician. Thus if women were educated to sexual function, they would not need to resort to abortion, and they would be better mothers able to endure pregnancy because they were knowledgeable of their condition. An even larger consequence would be the improvement of the entire nation

with its women, the heart of the home, better informed. Thus according to Dr. Barnes, it was the medical community's responsibility to provide appropriate education to women, to improve their health, to lengthen their lives, and to prevent criminal abortion.

The Crusade for Preventive Gynecological Care

Female illness related to social, psychological, and physical factors received the attention of female physicians. Inappropriate and inadequate female activities, especially as physical exercise, caused failure of proper physical growth and development. Additionally female physicians, and in some cases males, argued that extremes in fashionable dress contributed to illness because of the displacement of abdominal organs. They advocated the re-arrangement of clothing, particularly removal of corsets that caused pressure on the chest and waist, that would thus permit exercise of the abdominal muscles. They advocated exercises including breathing properly, and other forms of physical activity such as bicycling, walking, or appropriate outdoor pursuits.[143] Women traditionally suffered from infancy, because their efforts to squirm, kick, roll, or crawl were restrained. They were forced

into unnatural positions through the utilization of assorted pillows and props. Such lack of exercise, starting in infancy, and continuing through life, prohibited proper physical, and psychological development. "Air and exercise of the proper kind will many times restore cases that uterine treatments, medicine, and even castration have not benefitted....We wish particularly [to mention] the relation between functional disturbances and malnutrition. We believe the successful treatment of many of our chronic female patients depends upon...these points.[144]

By 1900, spokespersons for prevention especially noted the "total silence on the subject of preventive gynecology and obstetrics....Excessive childbirth has become to a great extent, a disease producing factor...," according to Dr. Julie Kapp. She cited excessive births as a causative factor in disease and as a preventive measure she proposed contraception:

> It is time the medical profession place in the hands of every female who reached adult life, a harmless, secure and practical preventive of contraception...for the help of thousands of women who are living with abnormal pelvic organs and dragging out a life of painful, abhorrent reproduction--we should, as women physicians come to the rescue, and let this century mark another widening avenue in preventive therapeutics.[145]

Attention to prenatal care as preventive medicine also received consideration, especially after the turn of the

century.

> Every pregnant patient should be under the special care during the entire period of gestation carefully watched as to elimination, and that good care now, better prepares her for the next pregnancy. Perfect physical development is the greatest stronghold against uterine inertia, (necessitating septic resort to forceps and various other serious operations to accompany delivery and for preventing exhaustion of patients) septic infections, eclampsia, subinvolution, and all irregularities of puerperal convalescence.[146]

Reference to post-natal care frequently received attention in the Women's Medical Journal. "Cervical tears should be repaired immediately...if the tear is at all extensive."[147] Female physicians addressed most every aspect of repair post-delivery as a means of prevention. "Lacerations of [the] perineum should be repaired immediately after delivery...and the patient may be saved from years of suffering."[148] Asepsis received attention in journal articles in 1899. "Strict aseptic methods...must be observed in the practice of obstetrics....[It] requires perfect training in every detail of aseptic technique."[149] Eleven years later, Effa Davis repeated these same admonitions: "To prevent puerperal infection, be consistent with aseptic and antiseptic technique."[150] Even though this was 1910, and the germ theory was generally accepted, the medical community still needed to be convinced of and instructed on the techniques of asepsis in Davis' opinion.

Like the argument for educational reform, that of preventing female gynecological problems, was rooted in the

female doctor's concept of domesticity. Prevention of complications of pregnancy could mean the difference between years of discomfort and misery or a healthy productive life. This area definitely was the responsibility of the physician and fulfilled the role of the female whose responsibility it was to alleviate suffering. In opposition to surgical removal of female genital organs, except for proven organic problems, women who practiced medicine saw their role as protective--preserving women's ability to have children, the ultimate fulfillment of their domestic role. These women did not always agree with male ideas of the causation of illness--all related to the uterus or ovaries. Instead they acknowledged a connection to female socialization that affected physical, and emotional conditions. As they protested what they believed to be excessive surgical intervention, they adhered to the traditional holistic medical practices of the nineteenth century.

Preventive Gynecology: Kansas Female Physicians.

As early as 1883, the publications of Kansas' female physicians advocated both physical and psychological education for women.[151] According to Dr. Storrs, medicine had been revolutionized in the last half of the nineteenth

century, since the publication of Dr. Oliver Wendall Holmes' paper concerning the contagiousness of puerperal fever. But curiously, on the topic of gynecology, she continued, the prophylaxis of so-called diseases of women had been nearly lost. In the Cylopaedia of Gynecology, published in 1888, for example, one would look in vain for any article relating directly to the etiology of disease among women. The Cyclopaedia of Gynecology of 1887, the work of German writers, likewise contained no reference to prophylaxis. Storrs also cited the paucity of materials on prophylaxis in several other sources.[152]

Dr. Storrs divided preventive gynecology into two distinct categories. First were general topics that fell into the category of problems that women should do or avoid, things the woman could control once she was made aware of the potential dangers. Included in this first group were such issues as improved physical development, proper development of the nervous system, improprieties of dress, imprudence after parturition, prevention of criminal abortion, and marriage with existing uterine disease.[153] These were issues that could be addressed by appropriate educational changes. The second etiological category listed child-bearing and infection by the gonococcus. The potential of the former might be prevented by a doctor who practiced good pre-natal and post natal care. The latter

in ordinary cases the husband might prevent. These two categories, according to Dr. Storrs, accounted for eighty-five percent of the disease of women.[154]

Gonococcal infections, according to Dr. Storrs, did not cause immediate death, but rather a life of such misery that death was a longed-for release. The failure to educate women, Dr. Storrs explained, lay with physicians, whom she believed were responsible for protecting the offender, rather then the innocent offended woman.[155] In other words, the physician who failed to educate women about the dangers of venereal disease including the method of transfer, were protecting the perpetrator who transmitted the disease, rather than the ignorant female who innocently acquired the disease from a "faithless spouse."

When addressing the issue of gynecological problems that resulted subsequent to childbirth, she raged: "Something must be radically wrong, that so many neglected cases of lacerated cervi[ces] and perineum[s], with the accompanying subinvoluted uteri, and long train of nervous symptoms come to the attention of specialists' hands."[156] In her opinion, there was a tendency to accept the unhealthy condition of women as inevitable, implying they preferred to be ill. Instead they chose a life of "pernicious dressing and reckless imprudence,...to

exaggerate nervous phenomena and induce uterine affections."[157] Disease was not fashionable according to Storrs, but rather a potentially preventable entity.

As to the causes of such phenomena, "women's dress [bore] the brunt of male denunciation[s], whenever [women's] ill health [was] mentioned." Dr. Storrs ventured to counter this argument through her own investigation, which she claimed demonstrated that nine-tenths of the women in the ordinary walks of life dressed comfortably.[158] The other excuse offered by the medical community was ignorance, which she rejected as no excuse at all. Continuing to speak about how ill-prepared women were for childbirth and confinement, she asked the ironic question--"if it takes three years of constant study to fit a man to wait upon a woman in confinement, how much longer ought it to take to fit that woman for her part in the preceding nine months, for the responsibility that would soon be hers?"[159]

Dr. Storrs questioned the inattention of the medical profession to what she viewed as basic preventive measures, whether they involved education of the woman or simple post-natal repairs by the physician. She rejected the excuse that the profession offered to explain their lack of action. If physicians requires so much education to assist at a delivery, why should not the women receive some

instruction about the process? Teaching, nurturing, protecting--these were the roles that Storrs understood were her responsibility as a physician.

Dr. Barnes implied the need for prevention as part of physician's responsibility in an article on the topic, complications of the menopause.[160] Like Dr. Storrs, Barnes believed that many small symptoms, which together might indicate more serious problems, were often ignored or as insignificant by physicians.

> I have felt that there is a lack of attention on the part of the medical profession, to the minor ailments, which are often precursors of serious disease as the menopause approaches....The pathway [to] preventive medicine should show the most beneficial results....The laity [too] should be instructed to attend to the lesser ailments complicating this period of life, and thus ward off the greater ones. ...often viewed with complacency by physicians, when in fact it was frequently an indication of organic lesions of the uterus, tubes, or ovaries.[161]

Irregular or increased flow, according to Barnes, may be indicative of "malignant degeneration." Cases of "women with marked neurotic temperaments frequently culminate in insanity associated with the menopause." In these cases insanity is regarded in a measure favorable in prognosis, where forty to fifty-five percent may recover. Dr. Barnes asked, "is it not reasonable to believe that preventive treatment might have relieved many from such disastrous results?"[162] In other words, why should women suffer at all if suffering could be prevented? During her

president's address to the Topeka Academy of Medicine and Surgery in 1897, Dr. Barnes reemphasized the necessity of preventive medicine and its intended results "in the prolongation of life and possibilities of an active life."[163]

Dr. Sara Greenfield, like Dr. Barnes, wrote about the menopause. She concurred with her that this was most important period of a woman's life. The responsibility for detecting simple symptoms indicative of more serious problems, Greenfield placed in the hands of the general practitioner. Though she did not elaborate at length, she strongly emphasized who she believed responsible to detect potential problems.[164]

Dr. Frances Harper also addressed the issue of those afflictions preventable by the physician. In her presentation before the Crawford County Medical Society in 1906, she spoke about the avoidance of subinvolution of the uterus as one component of preventive medicine. Subinvolution is the failure of the uterus to involute, or to return to its normal size and weight. According to Harper, this could occur with the puerpera (after delivery) or after menstruation. Failure to involute "constitute[d] the chief cause of all chronic uterine disorders, and for this reason, alone, its care and treatment cannot be over-estimated....It is important that the obstetrician should

recognize its presence, and correct abnormal conditions in its early stages."[165] According to the doctor, prophylaxis consisted of the complete evacuation of all secundines, (placental tissue), after labor, the avoidance of lacerations and infections, and rest in bed until the cervix and uterus were firmly contracted. In fact, she added, prevention should begin at conception, by the woman maintaining as perfect a physical condition as possible. To do this, the patient should have plenty of outdoor exercise and fresh air, good nutritious foods, and tonics if indicated.[166] Dr. Harper's underlying theme, analogous to Dr. Storrs, advocated preventive medicine that could be provided by proper attention from the physician.

Deborah Longshore advocated prophylactic measures in 1887. In addition to better education for women, she promoted physical exercise, food inspection, and the teaching of science in the lower grades. Longshore articulated support for women's physical education as she did the mental. At a program for the Farmer's Institute at Berryton, Kansas, in 1898, Dr. Longshore spoke on physical culture.[167] "Physical culture," she explained, "is simply making use of and improving natural forces, the physical improvement of the human body."[168] By her own observations, and participation, she noted significant improvement and even cures through the implementation of

physical exercise programs in women with nervous conditions, stomach problems, and even insanity. "Physical training, then,...is for all ages and all conditions, a most wholesome and necessary ingredient in...life.... which must find, and is finding, its place beside the one which develops the mind."[169] The Transactions of the Kansas Medical Society reported that Dr. Longshore's favorite remedy was outdoor exercise, and she "importuned the physician to urge on their lady patients to spend more time outdoors."[170]7 True to their admonitions, the Drs. Barnes, Greenfield, Harper and Longshore advocated prevention, both as a responsibility of the physician and of the women themselves, once they were informed. They particularly admonished their fellow physicians to adhere to practices that would prevent illness, that would maintain or restore the equilibrium of health. They tried to protect women from ill-health caused by what they considered ignorance and irresponsibility of physicians.

Gynecological Therapy: The Female Physician's Perspective

In addition to championing issues of prevention, some female doctors supported alternate gynecological treatment, particularly anti-vivisection. In a relatively brief, but

nevertheless energetic movement, women joined together into antivivisection societies. These flourished between 1885-1900 following the introduction of surgical antisepsis. The Women's Medical Journal reported that the "moving and directing power of antivivisection is found in women." In fact, such activities were highly criticized by the American Medico-Surgical Bulletin.[171] Its contributors objected to the frequency with which, in their opinions, pelvic surgery was performed unnecessarily. "Whether it is sleeplessness and general nervousness, hysteria, or sick headaches, neuralgia, painful menstruation, or any disturbance of the portal system, the cause is attributed by ambitious surgeons to diseased ovaries and tubes."[172] Women rejected the connection of psychological or physical conditions to the ovaries and other pelvic viscera. "Pelvic diseases are found in the insane...but that [the] insanity is the result of any disease of the ovaries or Fallopian tubes is a theory of imagination," announced the editor of the Women's Medical Journal, E. M. Roys-Gavitt.[173] "Insanity is related to the stresses and worries of life...the struggle for existence and the consequent worry and care of domestic life....The responsibility and treatment lies now and always will lie with the general practitioner."[174] Women practitioners only partially discounted the necessity for surgical

intervention. They emphasized that in so far as possible to determine, the condition should be "incurable and manifestly doing positive injury to the system [before vivisection should be performed]. In no instance should healthy ovaries be removed for nervous disease."[175]

Dr. Flora L. Aldrich of Minnesota declared: "those of us who have studied at the great medical centers can testify to the absolute healthfulness of the organs removed for the relief of pain and other symptoms either in the pelvis or elsewhere....I recall four cases where oophorectomy was advised for obscure and continuous pain in the pelvis in which the removal of tight corsets and the relief of chronic constipation resulted in each case in a perfect cure."[176]

Instead of vivisection, reformers advocated "intelligent and well directed local and constitutional treatment[s]."[177] A suggested prophylactic was patience and the elimination of undesirable factors. Women were the first to campaign for change, although a few male physicians late in the century began to recognize the value of the alternative therapies to the use of vivisection, such as the editor of the Kansas Medical Journal, Dr. J. E. Minney of Topeka. In an editorial of March 20, 1897, he stated:

> We must all admit that there are too many ailing women...that it would be poor policy to attempt

> to relieve all of them by castration if that were a sure remedy...a great many women have been castrated, but there can be no question that in some instances, and perhaps many, the operation was not necessary, but resulted in no benefit.[178]

Alternate proposals suggested the elimination of abnormal vaginal discharges through the use of douches and medicated vaginal tampons, repair of lacerations at childbirth, strict cleanliness in obstetrical practice, electrical curettings (scraping), proper nutrition, exercise and fresh air.

Likewise, rejection of the reflex-irritation theory of disease dealt specifically with avoidance of unnecessary gynecological surgery. "Healthy genital organs do not give rise to reflex symptoms."[179] "The reflex theory of gynecological troubles causing stomach troubles, headaches, and whooping cough," wrote Dr. Emil Ries in 1907, led to a

> number of men who operate for retroversion and shell out particles from the ovaries for sleeplessness and similar troubles. When the patient has recovered from the operation, she is not cured. This is one way of disproving the theory....I have personal observations ...where the patient's symptoms were just as bad or worse than before the operation. The other way to disprove of the reflex theory [is] to show that the symptoms are due not to any disease of the genitalia, but to something else.[180]

In the presentation of one case study, she described a woman operated on for "uterine problems" who in fact had gallstones.

Jessie F. Shane, of Springfield, Ohio, described alternate treatments. In her extensive practice she explained, she had encountered nearly every form of pelvic trouble, and it was "surprising as well as gratifying to know how much may be accomplished by non-surgical treatment." In place of surgery to which she reported her patients "recoil in horror from the mere mention of operation," she almost always used icthyol and glycerin tampons twice a week, with massage, packing, electricity, or simple douching as the case requir[ed]."[181] Here is illustrated by Dr. Shane and others, the stance they took on moderate therapy: pelvic organs should only be removed when there was evidence of diseased organs. Surgery should not be used to cure numerous other ailments far removed from the pelvic area caused by any of several factors, but not the uterus or ovaries.

Gynecological Therapy from the Female Physician's Perspective: Kansas Female Physicians

Several of the Kansas physicians in the study espoused support for alternate gynecological therapy, parallel to their sister physicians. The very act of providing such treatment is in itself a preventive measure-- the

prevention of unnecessary surgery.

Dr. Longshore reported on a case in which her moderate intervention made pregnancy possible. The patient had constricting bands in the posterior wall of the vagina, that decreased it to a size "no larger than a straw." Through her repeated dilatations over a period of time, plus continued home treatment by the patient, pregnancy became possible. Dr. Longshore cited the New York Medical Record of 1894 as a point of comparison for her less invasive procedure. Hers proved equally successful as the surgical intervention described in the journal. The physician writing in the Record proposed a more radical procedure--dissection or cutting the bands. Dr. Longshore opted to support her less radical method, which she declared effective once the patient conceived.[182]

Dr. Maggie McCrea presented an alternative to either manual, external, or internal version for transverse presentations at birth, considered to be a surgical intervention. Transverse presentation refers to the horizontal position of the fetus during labor. Such a position prohibits progress of labor and delivery, and usually requires some surgical intervention known as external or internal version, to return the fetus to the desirable vertex (head) position, preferable for a vaginal delivery. Dr. McCrea noted that all authorities on

midwifery divide the treatment of transverse presentations into external version, internal version and the combination of the two. She suggested an alternate method that was taught to her in medical college by her professor, Dr. Sarah Hackett Stevenson. The method needed to be used before any rupture of the membranes occurred. The knee-chest position required the laboring patient to assume a position on her knees and shoulders in the bed with the shoulders at the bed level, thus inverting the pelvis and the gravid uterus. The procedure, noted Dr. McCrea, was an ancient one used by midwives. She successfully utilized the method in two cases in her practice. McCrea also noted that this was an especially useful procedure for women physicians, since the amount of muscular strength a woman could apply to effect version was generally beyond the degree required. It was also preferable because it avoided the extreme pain often perpetrated upon the patient by some form of version. In her experience with the case in point, after about a half hour in the position, she reported that "the head had descended sufficiently to be detected," and after several hours had engaged in the lower pelvis. The response of the patient provided an added bonus, declared McCrea. Pains were "less severe" according to the patient. The second case was so successful in encouraging delivery, that Dr. McCrea recommended employing it in "all cases

where there is not an urgent demand for immediate interference."[183]

Dr. Storrs spoke most affirmatively about alternate gynecological therapy in a presentation before the East Kansas Medical and Surgical Society at Kansas City in 1894. In "the so-called diseases of women, prophylaxis has been so nearly lost sight of while surgery has usurped the field. I need not remind you of the multiplicity of the surgical art upon gynecological surgery in medical literature during the past ten years." As she spoke of the paucity of attention to preventive gynecology and suggested that the tendency in all the literature to imply that women's preference is to be ill she sarcastically asked:

> What wonder that the art of extirpation has supplanted the science of prevention, in treating such irrational beings and that the very latest and most approved method of dealing with diseased pelvic organs is to preserve them entire in alcohol, as being too complicated a mechanism for the ordinary woman to be entrusted with![184]

She continued, stating that she realized that to treat a Fallopian tube distended with pus by means other than surgical removal was "utter folly" and only aggravated by the so-called alternate treatments. Storrs placed responsibility in the lap of the profession.

> If the diseases of women are many of them preventable, then should[n't] the medical profession have a care that they are prevented? If women are reasonable beings, and who would deny that they are, then they can be taught, and it is the medical profession who must decide what they are to be taught.[185]

Dr. Storrs most outspokenly admonished the profession to cease the perpetration of surgical removal of uteri and ovaries as treatment for all but diseased conditions of these organs. She chided that women must be so irrational that they are incapable of understanding their own physiology or even to maintain the competence of their own pelvic organs. Again she placed responsibility on physicians to educate women who were not irrational, but rather reasonable creatures, and who, if given the opportunity could learn preventive measures towards improved physical existences.

Dr. Barnes proposed an alternate therapy for incomplete abortion that "if successful, [was] much easier both for physician and patient than the dilation of the cervical canal and manual extraction of secundines with finger, curette, or placental forceps. Moreover, it [could] be performed without family assistants, and without anesthesia."[186] She described the therapy as an "intra-uterine douche through Bozeman's douche, with a hot creolin solution," allowed to flow freely inside the uterus. Afterwards all clots and debris were removed by dull curette. The hot solution acted as a hemostatic agent and was allowed to flow until it returned white. Then the uterus was packed with iodoform gauze causing the uterus to

contract. The blood was unable to escape until the cavity distended when the flow dislodged the pack of gauze and all other uterine contents.

The procedure, she explained, also prevented subinvolution due to the fact that, as the uterus contracted to rid itself of the pack and products of conception, it also involuted rapidly. This therapy contrasted with the more usual dilatation and curettage accomplished with a sharp curette, dilators, and excessive pain for the patient. The treatment, according to Dr. Barnes is "endure[d] without a groan."[187]

Dr. Barnes also employed treatment for congestion of the uterus with the os (cervical opening) entirely closed by a firm membrane. She utilized a medicated tampon, moistened with boro-glyceride, inserted into the vagina for relief of the congestion. The sense of fullness and bearing down experienced by the patient abated after three treatments of iodine applied to the cervix, and the medicated tampons of absorbent cotton that "thoroughly relieved [the condition] without untoward symptoms."[188] Dr. Barnes also mentioned the use of medicated tampons on a patient with profuse leucorrhea.[189]

Kansas female physicians--especially the six investigated in this study--proposed specific changes in women's health care. They focused on preventive gynecology

and anti-vivisection. Specifically they identified with preventive measures, the teaching of hygiene and sanitation, education for women in physiology and science, dress reform, physical exercise, prevention of gynecological disorders, and anti-vivisection. They placed responsibility for the implementation of these measures directly on the shoulders of all physicians, both male and female. They challenged certain therapeutic measures as they attempted to protect the moral and natural order and at the same time taught health and hygiene in order to improve women's lives.

V. CONCLUSION

To infer that these six female Kansas physicians advocated traditional disease concepts that supported justification for their place in the profession is not difficult. The work of these female practitioners is more than a comment on traditional medical thought. It also provides observations on social thought and on gender norms.

Many women entered medical practice, like Elizabeth Blackwell, to occupy positions and exercise influences that they believed men could not fill. They had a vision of the unique contribution they would make as female doctors. As such they would link notions of morality to medical practice, which in their conception was dependent on female intuition. In this context they were conservators of the past, clinging to their traditional domestic sphere. Women who were physicians, it was thought, would keep the profession respectable. Medicine seemed especially suited to women because they would alleviate suffering and teach family health and hygiene. Practice in support of these tasks included preventive medicine, particularly the

improvement of women's knowledge of their own physiology, which they believed would improve women's lives and, in some cases, prevent the necessity of gynecological surgery. Evidence in historic literature established the fact that women in the profession supported specific preventive measures as essential to their practices.[190] Each of the Kansas women also practiced and advocated preventive measures. They admonished their fellow physicians to join them in their endeavors to improve women's health. Dr. Longshore repeatedly advocated prevention in the numerous presentations she prepared. Even the title of one--"The Ounce of Prevention, the Pound of Cure" presented in May 1897, suggests this practice.[191] Others included topics that covered quarantine, sanitation, food inspection, physical exercise and the teaching of science in the public schools. Her comments on these topics did not fall on deaf ears. Dr. Lewis, in responding subsequent to Longshore's presentation on "Physical Culture," spoke favorably of her: "This is a good paper...but these are useless words, for we do not expect anything but good papers from Dr. Longshore."[192] Comments such as this indicate that she was indeed esteemed in her profession. In addition, the fact that she held several offices in professional organizations suggests that her male colleagues regarded her contributions as credible.

Dr. Storrs articulated support for prophylaxis through improvement of women's knowledge of their own vital processes. The theme of prevention filled her writing. A presentation at the annual meeting of the Kansas Medical Society entitled "Prophylactic Considerations of Metritis and Uterine Displacement" implied prevention.[193] It also pervaded her surgical practice and her lectures at the Kansas Medical College. She devoted her entire career to the cause of prevention. As an extension of her domestic role, she attempted to improve the care of women and reduce their mortality.

Ida Barnes expressed similar sentiments concerning the education of women and preventive measures. She wrote prolifically during her professional practice as a spokesperson for women's health care. Drs. McCrea, Greenfield and Harper, though not as prolific in their writing, advocated preventive medicine as well. McCrea specified prevention in obstetrics, while Greenfield's emphasis was on prevention of the spread of illness by the application of bacteriological principles. Dr. Harper also addressed the issue pertinent to obstetrics and gynecological conditions.

These conclusions are the most obvious, but perhaps the more subtle ones are most significant. Comments on social thought and gender norms are more difficult to

exhume from the writing of the female practitioners. Their editorial comments lend credence to thought on these issues. These females took a radical step. They violated nineteenth-century norms for accepted female activity when they entered the public world of the male physician. But many of these women in the nineteenth century, including those in Kansas, believed that women should enter public life because they had a unique contribution that men could not make.[194] Women physicians expressed this goal by their behavior. Much of their work attests to the connection of women's traditional domestic sphere--the family--to the larger public sphere. They joined the profession by virtue of their "natural gifts" as healers and nurturers. In theory at least, they would be dedicated practitioners, oblivious to selfish motives and sensitive to the wives, mothers, and children who would be their primary constituency. Dr. Sara Greenfield expressed these ideas:

> I feel that there is a place for women in the practice of medicine....There are lines of work in medicine for which women are special [sic] adapted, and I think that they can occupy their positions and do their work without at all interfering with or usurping....There's much in which they can help each other, and thus be a boon to suffering humanity in general.[195]

In the context of reform efforts, women physicians were highly visible. They were particularly adept at developing programs for women and children during the period of this study and up to 1930. They actively participated in

suffrage and public health. Dr. Greenfield was the most outspoken in public health. As state bacteriologist for the Board of Health, and simultaneously as Professor of Bacteriology at the Kansas Medical College, she was in a unique position to promote disease prevention at the public health level. Before the Shawnee County Medical Society, she promoted prophylactic and curative measures for tuberculosis. She encouraged public education, to be followed by legislation against "crowding in tenements of great cities and the introduction of better sanitary measures among all classes,...the building of sanitoria, the establishing of fresh air camps, and improved therapeutic treatment."[196]

She also campaigned within the state, encouraging Dr. Crumbine in his public health campaign that soon was known nationwide. Dr. Longshore also actively participated in the suffrage movement as president of the Good Government Club of Topeka.[197]

One of the main circumstances that the six Kansas physicians emphasized was the destructiveness of female socialization. Each physician who addressed the issue of education for females was also commenting on female socialization. Women, they claimed, were educated and socialized in an inappropriate manner. Properly educated women would be better mothers who reared healthier children

and who would enjoy improved physical health themselves, because they understood their own bodily functions and basic health rules.

All the arguments used against women who desired to become physicians illustrated gender biases. Women in medicine threatened norms of female behavior and became the focus of debate over women's proper role in and its relationship to public and private health. Whether it was limited mental capacity, female delicacy, feminization of the profession, or economic threat, women functioned skillfully to dispel doubts and to gradually convert medical and public opinion in their favor. The Kansas physicians, like others, defined their sphere as broadly as possible in order to gain acceptance for participation in public life, but even so they still emphasized the differences between men and women.

Social thought is even more difficult to assess since the issues of gender, reform efforts, and medical practice are inter-meshed with social thought. The ideology that supported women's role in medicine perpetuated their social roles and tended to keep them separate. It was as if women were in the profession but not really an equal part of it. They used their special skills in order to achieve a higher social purpose in medicine--the regeneration and maintenance of family life and social morality. Thus the

separation by gender implied that women had a place in medicine only in so far as their traditional roles applied to medical practice.

An additional conclusion that can be drawn concerns the conflict created by the new science. Dr. Storrs very explicitly questioned the conflict created by the new sciences. It threatened her place as a physician, whose duty, she believed, involved the whole person including the moral and spiritual existence which makes medicine a holistic art rather than a skilled trade. Dr. Greenfield supported the new bacteriology in her positions as professor and state bacteriologist. Yet she too wrote on prevention as a reflection of the extended domestic role to which most female physicians ascribed. Dr. Barnes, described by J. L. King as a woman who believed in woman's place in a man's world, and who also sought post-graduate work in diagnostic techniques, in x-ray and radium, still often wrote papers that mirrored the domestic preservation of the moral order. The paper on abortion, in particular, illustrates adherence to the idea, that women's role preserved morality which abortion violated.[198] Most of Dr. Longshore's articles supported femininity, domesticity, and morality, yet she encouraged women to become aware of the differences between diseases.[199]

These Kansas women represent a widespread point of

view among women who entered public life because of the contributions they believed they could make to society. In this context they saw themselves as conservators of the past. At the same time, they were innovators who, even though they struggled with the new science of bacteriology, gradually and subtly began to adopt its precepts into their practices.

ENDNOTES

1. Papers of Dr. J. A. Read, Tecumseh, Kansas, Topeka, Kansas: Kansas State Historical Society.

2. Emily Butcher Diary, Sun City, Kansas, 1897 (July 29, 1897; Aug.22, 1897; Sept. 16 & 20, 1897), Topeka, Kansas: Kansas State Historical Society.

3. Editorial, Women's Medical Journal 1 (July 1893): 6.

4. Claudia A. Murphy M.D., "Are Women a Failure?" Women's Medical Journal 1 (1893): 144-145.

5. Regina Morantz-Sanchez, "So Honored, So Loved," Send Us a Lady Physician, ed. Ruth J. Abram (New York: W.W. Norton, 1985): 235.

6. See Regina Markell Morantz, "Women Physicians, Co-education and the Struggle for Professional Standards in Nineteenth-Century Medical Education" (Unpublished paper delivered at Berkshire Conference, Mount Holyoke College, South Hadley, MA, August 1978).

7. "So Honored, So Loved:" 231-245; and Regina Morantz-Sanchez, Sympathy and Science (New York: Oxford Press, 1985): 65-90.

8. Phrase first used by Daniel Scott Smith in "Family Limitation, Sexual Control and Domestic Feminism in Victorian America:" in M. Hartman and L. Banner, eds., Clio's Consciousness Raised: New Perspectives on the History of Women (New York: Harper and Row 1974): 119-136.

9. Ruth J. Abram, "Will There Be a Monument? Six Pioneer Women Doctors Tell Their Own Stories," in Ruth J. Abram, ed., "Send Us a Lady Physician: Women Doctors in America 1835-1920 (New York: W.W. Norton & Co., 1985): 75.

10. Larry Joachims, Medicine in Kansas 1850-1900 (Emporia, Kansas: The School of Graduate and Professional Studies, 1979): 34.

11. Many examples of this argument will be presented in chapter IV. For one example see Belle Craven M.D., "Mental and Physical Culture," Women's Medical Journal 5 (Jan. 1897).

12. Minutes of Washburn College 1881-1926, "Minutes of Kansas Medical College 1883-1912" (Ann Arbor, Mich.: University Microfilm, box 307), Topeka, Kansas: Kansas State Historical Society.

13. Report of the Secretary of the Interior (Washington D.C.:Government Printing Office, (1871):514-515; (1877):123-125; (1881): 144-161; and Editorial, "Medical Education in the United States," Journal of American Medical Association 3 (Aug.31, 1904): 504-505; (Aug 19, 1904): 536-367; (Aug.15, 1908): 586-587; (Aug.20, 1910): 681-691. Sue Zschoche, "Women in Medical Schools 1890-1917," (Unpublished manuscript, May 1981). Women's medical education was clustered in Pennsylvania, Illinois, California, New York, Massachusetts, Maryland and Michigan where 2/3 of all female physicians were educated.

14. "Remembering Dr. Longshore," Topeka Capital Journal (April 27, 1919), in Medical Clippings Topeka Kansas: Kansas State Historical Society.

15. Kansas Women's Day Club, "Kansas Women of Medicine," Topeka, Kansas, Kansas State Historical Society: 10-11.

16. Ibid: 10.

17. Transactions of Kansas Medical Society (1880).

18. There are conflicting dates as to Dr. McCrea's age at death owing to a controversy over her date of birth. It seems most logical that she was born in 1854, if in fact she graduated from medical college in 1880. Therefore she would have been eighty-four at death in 1938.

19. James L King, ed., History of Shawnee County and Representative Citizens (Chicago: Richmond and Arnold, 1905): 423.

20. Ibid.

21. Larry Joachims, "Medical Education in Shawnee County," Shawnee County Historical Society Bulletin (Nov. 1980): 6.

22. "Minutes of East Kansas Medical Society," Kansas Medical Journal 5 (Feb. 1893): 49; and "Minutes of Topeka Academy of Medicine and Surgery," Kansas Medical Journal 5 (May 1893): 6.

23. Advertisement, Kansas Medical Journal 7 (1895-1898): ii.

24. Advertisement, Kansas Medical Journal 10 (1898): ii.

25. Kansas Medical College Minutes, (July 7, 1896), The minutes of the Kansas Medical College of July 7, 1894 reported Dr. Storrs resignation as instructor of Latin. They do not subsequently indicate when she began the surgery position. The 1896-1897 listed her as a member of the faculty in the surgical position.

26. Howard D. Berett, Who's in Topeka? (Topeka, Kansas: Adams Bros. Pub. Co., 1905): 48.

27. "Minutes of Kansas Medical College" (Sept. 8, 1904): 72.

28. Kansas Women's Day Club, "Kansas Women of Medicine," Topeka, Kansas, Kansas State Historical Society: 12. Dr. Crumbine was a noted Wichita physician who was probably the foremost proponent of public health measures in the country.

29. Other female faculty of the Kansas Medical College during the early years included Dr. Elvenor Ernest, Dr. Violet Church, Dr. Harriett Adams, besides Dr. Greenfield, Dr. Storrs, and Dr. Harper.

30. Catalogue of Kansas Medical College, 13th ed. (Topeka, Kansas, 1902-1903): 2.

31. "Large Class Graduates," Topeka Capital Journal (April 21, 1904), in Medical Clippings (Topeka, Kansas: Kansas State Historical Society): 126.

32. Charles E. Rosenberg, The Care of Strangers: The Rise of the American System (New York: Basic Books, 1987): 377.

33. Joachims, Medicine: 8.

34. William G. Rothstein, American Physicians in the Nineteenth Century: From Sects to Science (Baltimore: Johns Hopkins University Press, 1972): 152-154.

35. Joachims: 17-18.

36. Joachims, Medicine: 23-34.

37. J.A. Read. "Why I am an Eclectic," Proceedings and Papers of the Kansas Eclectic Medical Association, Topeka, Kansas, May 5 and 6 1896. Reprint from The Annals of Eclectic Medicine and Surgery for 1896 (Topeka, 1896): 9-14.

38. Annual Report of the President of Harvard College 1869-70 in Paul Starr, The Social Transformation of American Medicine (New York: Basic Books, 1982): 113.

39. Minutes of Kansas Medical College, Minutes 1913, Records of Washburn College 1881-1926 (Ann Arbor, Mich.: University Microfilm, Box 307), Topeka, Kansas: Kansas State Historical Society.

40. See Zschoche, "Women in Medical School, 1890-1917," Unpublished manuscript, May 1981, no pagination.

41. James J. Walsh. "Women in the Medical World," New York Medical Journal (1912), in "Send Us a Lady Physician: Women Doctors in America, 1835-1920, ed. Ruth J. Abram (New York: W.W. Norton and Co., 1985): 63.

42. W.W.Parker, M.D., "Woman's Place in the Christian World: Superior Morally, Inferior Mentally to Man-Not Qualified for Medicine or Law-the Contrariety and Harmony of the Sexes," Transactions of the Medical Society of the State of Virginia (1892): 86-107, in Regina Morantz-Sanchez, "The Female Student Has Arrived," quoted in Send Us A Lady: 67-68.

43. Minutes Kansas Medical College, no pagination.

44. Paul Starr, Social Transformation of Modern Medicine (New York: Basic Books, 1982): 102

45. Thomas Neville Bonner, Kansas Doctor: A Century of Pioneering (Lawrence, Kansas: University of Kansas Press, 1959): 46.

46. Robert W. Richmond, Kansas: A Land of Contrasts (Arlington Heights, Illinois: The Forum Press, 1980): 176.

47. Starr: 17-18.

48. Charles E. Rosenberg, The Cholera Years (Chicago, University of Chicago Press, 1962): esp. Chapts. 2 & 7.

49. D.W. Cathell, The Physician Himself (Philadelphia: F.A. Davis, 1890): 80, 93; quoted in Starr: 86.

50. Starr: 81.

51. Regina Morantz, "The Lady and Her Physician in Clio's Consciousness Raised: New Perspectives on the History of Women, ed. Mary Hartman and Lois W. Banner (New York: Harper, 1974): 48-49.

52. John Read, M.D., Day Book, 1886-1888, John Read Papers, Topeka, Kansas: Kansas State Historical Society, no pagination.

53. John Read,M.D., Account Book, John Read Papers, Topeka, Kansas: Kansas State Historical Society, no pagination.

54. "Recipes," Stewart-Lockwood papers 1878-93, Spencer Library, Kansas University, Lawrence, Kansas. The clipping did not indicate where the newspaper The Times was published.

55. Diary, Annie B. Sweet Papers, Topeka,Kansas: Kansas State Historical Society.

56. Bonner: 125, 129.

57. Sarah Stage, Female Complaints: Lydia Pinkhan and the Business of Women's Medicine (New York: Norton, 1979): 89-90, 105-106, 130-131, in Starr: 128.

58. Morantz: 44.

59. Carroll Smith-Rosenberg, and Charles Rosenberg, "The Female Animal: Medical and Biological Views of Woman and Her Role in Nineteenth-Century America," Journal of American History 60 (Sept., 1973): 334.

60. Jane B. Donegan, Women and Men Midwives: Medicine, Morality and Misogyny in Early America (Westport, Conn.: Greenwood Press, 1978): 150-151.

61. Jean-Jacques Rousseau, Emile, translated by Barbara Foxley (originally published 1762; English edition 1860, reprinted London: Dent, 1974): Bk. 5.

62. G. J. Barker-Benfield, The Horrors of the Half Known Life: Male Attitudes Toward Sexuality in Nineteenth-Century America (New York: Harper and Row, 1976); and Ann

Douglas Woods, "The Fashionable Diseases: Women's complaints and Their Treatments in Nineteenth-Century America, Journal of Interdisciplinary History 4:1 (Summer,1973); and Carroll Smith-Rosenberg, "The Hysterical Woman: Sex Roles and Role Conflict in Nineteenth-Century America," Social Research 39 (Winter, 1972): 652-678.

63. Mary A. Spink, M.D., "The Causes of Neuresthenia Among Women of Today," Women's Medical Journal 4 (Feb., 1896): 36.

64. Morantz-Sanchez, Sympathy: 43-50.

65. Bonner: 202.

66. Barker-Benfield: 86.

67. Morantz-Sanchez: 53. She claimed that the women's colleges held refreshingly progressive courses of study.

68. Zschoche,"Women in Medical Schools 1890-1917:" no pagination.

69. Ibid.

70. Morantz-Sanchez, Sympathy: 54.

71. Ibid: 52.

72. Ibid: 55.

73. Ibid, 3-5.

74. Samuel Gregory, "Female Physicians," The Living Age (1862): 73, 2453-249; Ann Preston, Introductory Lecture on the Course of Instruction in the Female Medical College of Pennsylvania (Philadelphia, 1855): 12; quoted in Sympathy: 52.

75. "The Influence of Women in the Profession of Medicine," Essays on Medical Sociology, 2 vols. (London: Ernest Bell, 1902), reprint (New York: Arno, 1972) vol. 2: 5-6, 12; quoted in Morantz-Sanchez, Sympathy: 190.

76. Jacobi to Blackwell, (Dec. 25., 1888); quoted in Morantz-Sanchez, Sympathy: 196.

77. "Commencement Address, 1880": 348, 352, 354; quoted in Morantz-Sanchez, Sympathy: 198-199.

78. For a discussion of the therapeutic revolution see Morris J. Vogel and Charles E. Rosenberg eds., The Therapeutic Revolution: Essays in the Social History of American Medicine (Philadelphia: University of Pennsylvania Press, 1979) and Regina Morantz-Sanchez, Sympathy, esp. ch. 7.

79. M. L. Holbrook, Parturition Without Pain: A Code of Direction for Escaping from the Primal Curse (New York: 1887): 1405 quoted in Carroll Smith-Rosenberg and Charles Rosenberg, "The Female Animal": 335.

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WOMEN, MEDICINE AND SCIENCE: KANSAS FEMALE PHYSICIANS 1880-1910

by

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ABSTRACT

Female physicians in the nineteenth century faced opposition from the medical profession and from societal norms that dictated specified roles for females in Victorian society. Females who practiced medicine in Kansas struggled with these problems which were manifest nationwide. They clung to traditional therapeutics compatible with their domestic role extended into the public sphere. The advent of new bacteriological principals seemed to contradict the justification for women's place in medicine.

Six female physicians were selected for this study to represent practitioners within the state. Their medical education patterns reflect the overall pattern in the state, and their practices spanned the years of the study, 1880 to 1910. Chosen for the study were Dr. Deborah K. Longshore, Dr. Maggie McCrea, Dr. Ida Barnes, Dr. Frances Storrs, Dr. Sara Greenfield, and Dr. Frances Harper.

The argument of this study is that females in medicine in Kansas, as nationwide, remained faithful to traditional disease concepts that justified their places in the profession as preservers of the "moral and natural order."

They advocated preventive medicine, opposed vivisection of the female organs of reproduction and advocated changes in the socialization and education of girls in order to develop stronger, informed women, both physically and psychologically. At the same time, they struggled with the implications of the new science, particularly bacteriology, that explained the origin of specific disease entities. They believed the new science threatened their place as protectors of the natural order because it eliminated the need for the application of feminine gifts as healers and preservers of morality. They sought to govern their practices according to the "laws of nature" by which people could achieve the proper balance between environment and individual behavior in order to restore and maintain health.

The six female physicians studied reflect this struggle between traditional medical justification for the female role in medicine as an extension of their domestic sphere, and the contradiction created by the new science. They were outspoken about traditional holistic medical practice as spokespersons for female professionals in the state. They accepted the traditional female roles in medicine and in subtle ways at the same time were beginning to adopt new scientific ideology into their practices.

The years 1880 to 1910 were selected because of their significance in medical history. The year 1880 is the

approximate date marking the beginning of the understanding of bacteriology or germ theory. The year 1910 is recognized as a dividing point due to the Flexner Report, a study of medical schools sponsored by the Carnegie Foundation which investigated the inadequacies in medical education. This places the study in the transitional period between the first understanding of the germ theory and the establishment of modern medicine. It was during this time frame that medical practice struggled both to establish professionalism and to adopt new scientific advances that gradually transformed medical therapeutics.

The study opens with an introduction followed by a description of the state of medicine nationally. The purpose of this is to place Kansas in the context of the larger picture. Next follows a discussion of the professional opposition to women entering the field of medicine and a depiction of women's response to that opposition. The narrative continues with an explanation of female illnesses as understood by the medical community and a description of how the new science of bacteriology affected traditional values in medical care, particularly for female practitioners. The largest portion of the thesis describes the medical ideas and ideals of the six female physicians. The study demonstrates that Kansas female physicians supported traditional therapeutics but at the same time were beginning to adopt new scientific

ideology into their practices.