How Factors like 1800's Gender Expectations, Misconceptions, and Moral Traditions Shaped US Women's Reproductive Medical Care

by

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ABSTRACT

In the last 200 years, advancements in science and technology have made understanding female sexual function and the female body more feasible; however, many women throughout the US still lack fundamental understanding of the reproductive system in the twenty-first century. Many factors contribute to the lack of knowledge and misconceptions that women still have. Discussing sexual health tends to make some people uncomfortable and this study aims to investigate what aspects of somewhat recent US history in women's health care may have led to that discomfort. This thesis examines the question: what are some of the factors that shaped women's reproductive medicine in the US from the mid 1800s and throughout the 1900s *and* what influence could the past have had on how women and their physicians understand female sexuality in medicine and how physicians diagnose their female patients in the twenty-first century. A literature review of primary source medical texts written at the end of the 1800s provides insight about patterns among physicians at the time and their medical practice with female patients. Factors like gendered expectations in medical practice, misconceptions about the female body and behaviors, and issues of morality in sex medicine all contributed to women lacking understanding of sex female reproductive functions. Other factors like a physician's role throughout history and non-medical reproductive health providers and solutions likely also influenced the reproductive medicine women received. Examining the patterns of the past provides some insight into some of the outdated and gendered practices still exhibited in healthcare. Expanding sexual education programs, encouraging discussion about sex and reproductive health, and checking gendered implicit bias in reproductive healthcare could help eliminate echoes of hysteria ideology in the twenty-first century medicine.

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I. Introduction

For centuries, many women and their medical care providers lacked the tools to understand women's reproductive anatomy and sexual function. Only in the last 200 years have many women and their physicians begun to gain medical understanding of sex and the inner workings of the female body (Thompson). In the last 200 years, advancements in science and technology have made understanding female sexual function and the female body more feasible; however, many women throughout the US still lack fundamental understanding of the reproductive system in the twenty-first century. Many factors contribute to the lack of knowledge and misconceptions that women still have, including non-comprehensive sexual education and physicians and health providers continuing to fail to adequately educate their patients. Discussing sexual health tends to make some people uncomfortable and this study aims to investigate what aspects of our somewhat recent US history in women's health care may have led to that discomfort.

This study aims to identify moments in US history that have helped shape the field of obstetrics and gynecology, influence how physicians have practiced reproductive medicine, and also influence how women patients have understood their sexual function. Physicians undoubtedly have played a large role in history with the responsibility of communicating medical information to women. Yet women get information (or misinformation) in other ways outside of traditional medicine.

This thesis examines the question: what are some of the **factors** that shaped women's reproductive medicine in the US from the mid 1800s and throughout the 1900s *and* what

influence could our past have had on how women and their physicians understand female sexuality in medicine and how physicians diagnose their female patients in the twenty-first century.

During the 1800s and 1900s, the medical field lacked the professionalization and technological advancements existing today in the twenty-first century, and the way physicians and members of society understood women and their bodies influenced the reproductive care their received. Prior to the 1800s, childbirth most often occurred at home, overseen by midwives, and did not typically involve the intervention of a medical physician (Donegan). Likewise, during the 1800s, many practiced as physicians without a license since standardized medical schools and professional licensing only became regulated in the early twentieth century (Horwitz, "Restell"). Physicians practiced both with and without a license and were also not prohibited from conducting gynecological experiments on female patients, including black slaves in some cases who did not provide informed consent (Horwitz, "Speculum"). With the formation of medical schools, US medicine became more professionalized and formally trained medical physicians began taking over the role of a midwife in childbirth, encouraging women to give birth in hospitals (Rosenberg and Smith-Rosenberg). With the movement from home births to hospitals, doctors encouraged the usage of forceps, specula, and other devices to better control the childbirth process (Horwitz, "Speculum"). Additionally, during the late 1800s, the medical field began harnessing electricity into machines and technologies for use in medicine and applied some theories about electrical properties in relation to the human nervous system, especially to female patients (Morus). Some uses of electricity in gynecology during the late 1800s and early 1900s may be considered questionable, unnecessary, and unsafe medical practices by twenty-first medical standards, such as the direct application of metal electrodes to the uterus (Walling).

Prior to the mid 1900s, women were not given many of the same freedoms as men, which influenced their access to medical treatment and information. According to historians of medicine Carroll Smith-Rosenberg and Charles Rosenberg, during the nineteenth century some women in Europe and the US began questioning traditional and constricting social roles for women (Rosenberg and Smith-Rosenberg). Many were discouraged from being involved in US society outside the household, unable to achieve an education, and unable to regulate and manage their reproduction (Rosenberg, and Smith-Rosenberg). Women were unable to vote in US elections until 1920 and were unable to access safe and legal birth control and abortion until the 1970s. For the majority of American history, many decisions regarding a woman's life were decided by her husband, father, or the other men in her life, including decisions about her medical care and reproductive health. During the 1800s and 1900s, advocates fought for more political, social, and economic freedom for women, a process that is still continuing today in the twenty-first century (Starr).

Prior to the mid 1900s, many women were also diagnosed with a medical condition called female hysteria by their physicians. Hysteria was a catch-all diagnosis used by doctors for whenever a woman's body or mind functioned or behaved in an unfavorable way according to the physicians and US society's expectations of women (Maines). Most physicians were male and only a few specialized in women's health, or the field that would come to be known as obstetrics and gynecology (Taska et al.). Physicians diagnosed hysteria based on a long list of common symptoms including: headache, forgetfulness, irritability, insomnia, writing cramps, hot flashes, excessive vaginal bleeding, heaviness in the limbs, usage of coarse language, severe cramping, difficulty breathing, desire for clitoral stimulation, hyper-promiscuity, mood-swings, nausea, anxiety, drowsiness, phantosmia, loss of appetite, aging, back pain, swollen feet, cancer,

organ failure, endometriosis, heart disease, epileptic fits, and what are now known as symptoms of depression, schizophrenia and other psychological disorders (Taska et al.). Women received medical treatment for hysteria and, like their physicians, many understood their condition as a pathological disease that only occurs in women. While hysteria is no longer used as a diagnosis by doctors in the twenty-first century, some agree that hysteria ideology still persists and promotes sexism, especially in medical practice in US society (RTI International).

To investigate the factors that shaped the field of women's sexual health, I use articles I have written for the *Embryo Project Encyclopedia*, a National Science Foundation funded endeavor. The Embryo Project is composed of a group of researchers and writers who provide original content in the form of extensively peer reviewed historical articles for the *Embryo Project Encyclopedia*. The *Encyclopedia* is an online, Open Access publication that publishes articles and resources broadly related to subjects involving reproductive and developmental biology. The project aims to increase scientific literacy as well as provide academic research classes on writing and editing skills in order to provide the EP contributors with adequate skills to produce quality written work to submit for further editing and later be published on the online site. Article subjects range from people, organizations, laws and court cases, experiment, technologies, literature pieces, and concepts all relating to the themes of the EP. Often times, contributors write articles in related clusters in order to cover many aspects of a historical moment (*The Embryo Project Encyclopedia).* For this study, I have clustered articles around 1800s and early 1900s obstetrics and gynecological standards that might have influenced how reproductive medicine and sex are practiced, taught, and understood in the twenty-first century.

While this study focuses on history, it is important to acknowledge that the events of the past should not always be viewed as wrong or immoral because of historical context. What may

be viewed as sexist and abusive towards women in the twenty-first century may have been understood by society entirely differently over one hundred years ago before medical advancements enabled better understanding of human bodies and function. It may be unfair to view the events and ideologies of the past as a mistake because the understanding of the human body was based on the best logical scientific ideas of the time without the technology to provide much clear answers. All doctors of the past were not trying to harm female patients, and many were trying to solve medical problems; however the practical routes they chose might not have prioritized women's autonomy and interests. They may have done the best they could with the minimal resources they had and the primitive understanding of the female body, but often times preconceptions about gender and societal norms influenced medical thinking about reproduction. Additionally, while historical misconceptions about male sexuality and reproductive health may have also resulted in gender-norm-fueled ideologies about how men should look and behave sexually, this study will focus on the effects of historical medical misconceptions and moral ideologies on *female* sexual health.

While many factors could have contributed to the widespread misunderstanding of women's sexual wellness, I have identified several historical factors that may have influenced how women in the twenty-first century understand and view their bodies, sexually. Three primary factors and two slightly more secondary factors shaped how we understand women's sexual medicine. The first primary factor is the gendered expectations propagated in medical practice during the 1800s. Physicians were vocal in their publications on their perceived importance of preserving gender roles and treating patients based on what was believed to be healthy and normal for their gender at the time. The second factor is the scientific and medical misconceptions that physicians based their diagnoses and treatments on during medical practice.

Physicians used biological arguments to justify the natural inferiority of women compared to men (Rosenberg and Smith-Rosenberg) and many historic ideas about women's sexual functionality were rooted in antiquated beliefs that a woman's uterus governed her body and had the ability to cause most medical problems in women (Horwitz, "Wandering Womb"). Those ideas were propagated in medical practice during the 1800s and influenced medical thinking regarding female patients (Rosenberg and Smith-Rosenberg). The third is the influence of sexual morality in reproductive medicine and what was deemed permissible or obscene for discussion in the medical field. Discomfort in discussing sex is still common and was even more prominent in the 1800s and early 1900s when the medical field first formally began discussing sex in medicine in the US. Obscenity laws prevented the circulation of written materials about contraception and other women's health related topics, making it difficult for women to access information (Seward).

I have identified two additional minor factors that may have also influenced modern reproductive health care. One is the importance of medical tradition and the changing role of a doctor throughout history. In 1847 the American Medical Association adopted their Code of Medical Ethics which includes the Hippocratic Oath physicians have taken for centuries (Riddick). Physicians swear to cause no harm to their patients and use their authority to work to heal patients only; however not all physicians have practiced medicine in the same way, and women throughout history have claimed to feel patronized by their male physicians when inquiring about their own health. The second possible factor is the influence of women-promoting "female physicians" who aimed to provide safer reproductive health solutions like birth control and abortions for women, despite having no formal medical training. Many women sought desperate abortions and received medical advice and treatment from those non-formally

trained providers. Without their law breaking, advocacy, and rebellious actions, many reproductive health solutions that women of the twenty-first century take for granted may not have existed, including menstrual aid medication like midol, birth control pills, women specific health books and resources, tampons, and the option of obtaining a legal abortion in the case of an unwanted pregnancy (Horwitz, "Non-medical Origins). The factors I have identified in this study are not mutually exclusive, and they are not the only ones. For example, examining wandering womb in this ideology may serve an example of gendered practicing by physicians as well as medical misconceptions about biology and female physiology and may also reflect the historic moral difficulties in practicing women's sexual medicine.

This study first includes literature reviews of two primary source medical books, both published in the first years of the 1900s. Those literature reviews are presented here in the form of Embryo Project articles and are used to illustrate some of the early standards for some physicians specializing in women's health at the time. Following the literature review are sections discussing the three primary factors including Factor 1: Gendered Expectations in Medical Practice, Factor 2: Scientific and Medical Misconceptions About Female Physiology and Behavior, and Factor 3: Sexual Morality in Medical Practice. The secondary factors are then discussed in less detail in Factor 4: Medical Tradition and the Role of a Physician and Factor 5: Non-medical Reproductive Health Solutions and Practitioners. After discussing the factors, this study highlights how the historical factors mentioned may impact the way women understand their bodies and receive reproductive health care in the section Modern Relevance and Conclusion.

Throughout this study, I have chosen to draw on much of the research that I have conducted over the past four years through my work with the Embryo Project. In some instances,

my own full articles are sampled to highlight a specific moment in history. In other cases, small quotes or sections of articles are pulled and inserted as in text block quotes. In both cases, the quotes and samples are from my own published writing or articles that are undergoing the publication process and including a wide range of topics and sources. There are also instances that I cite other Embryo Project articles that I am not the author of, demonstrating the utility of the project and mutually beneficial relationships among student researchers.

II. Primary Source Review

In the early 1900s, more physicians began studying sexual wellness and seeking to better understand male and female sexual function. Some created medical manuals for other doctors on the proper sexual functions for men and women. Some voiced that discussing those topics was inappropriately erotic and uncomfortable, while others expressed their desire to study and elucidate topics relating to sex. I have identified primary examples of physicians regarded as reproductive health experts (of their time) who published medical information about sexuality. Their publications provide context into the medical ideology surrounding sex and reproduction during the late 1800s and early 1900s and what physicians understood about women's bodies before technological advancements allowed for clarification. One of those was the book *Sexology* published in 1904 by physician William Walling.

Sexology **(1904) by William H. Walling**

Horwitz, Rainey, "*Sexology* (1904) by William H. Walling ". *Embryo Project Encyclopedia*. Forthcoming publication.

Sexology is a family medicine reference book published in 1904 by William H. Walling, an MD and professor of gynecology. In his book, Walling proposed that his guidance would help

people who were married, single, young, old, and any who wanted to avoid what he claimed were the detrimental health consequences of gender misconduct or not conforming to gender expectations. *Sexology* discusses issues including masturbation, abortion, pregnancy, labor, and marriage. Despite Walling's sparse scientific explanations and evidence for his medical claims, the book was published by the Puritan Publishing Company and received many positive reviews and endorsements from other physicians, college presidents, politicians, and religious leaders. Many of Walling's claims in the book would be considered by some members of US society in the twenty-first century to be sexist and oppressive towards women, but at the time would have been recieved differently. *Sexology* provides readers of the twenty-first century with examples of historical medical misconceptions of male and female anatomy and provides context into the logic of reproductive medicine during the turn of the twentieth century.

William Henry Walling was born in Smithville, New York in 1836. Walling served for the Union hospital service in the US Civil War during the 1860s and received a Congressional Medal of Honor for his service. Walling received his medical degree from Medico-Chirurgical College in Philadelphia, Pennsylvania, in 1889. He later worked as a physician and professor of Gynecology at Eastern College, as well as a professor for Electrotherapeutics at his alma mater, Medico-Chirurgical College. Electrotherapy involves utilizing electricity for medical purposes. While living in Philadelphia, he also served as the editor for the Philadelphia *Medical Times and Register*, a bi-weekly medical journal. According to his obituary in the Journal of The Medical Society of New Jersey, Walling was a prominent figure in medicine at the time and was a member of the America Medical Association, The Atlantic County Medical Society, and The Medical Society of New Jersey. Walling studied a variety of progressive medical issues, including sexual health and wellness, electrotherapy, women's reproductive medicine, urology,

or the study of the urinary tract, and malignant diseases of the rectum. Walling's book was advertised in popular publications like *Life Magazine* and *Literary Digest* into the 1910s and offered guidance on how to lead a happy and healthy marriage by seeking knowledge on one's sex roles.

Sexology was published in 1904 and includes many ideas that were demonstrated through the twentieth century as medical misconceptions. At the time of the book's publication, women were unable to vote in the US, abortion and the use of contraception were criminal offenses, and many women were diagnosed with female hysteria, a catchall diagnosis for women experiencing symptoms ranging from headaches and shortness of breath to terse language and hypersexuality. Walling's book was aimed at a male audience and provides context on the state of reproductive medicine and relationship psychology during the early 1900s. Additionally, in 1893 Johns Hopkins School of Medicine was established, reflecting a rise in medicine and medical education in the US during the turn of the century, and allowed for the better understanding of the human body, dispelling former medical practices.

The book begins with the introduction, where Walling explains why he felt the need to create the book. In the next sections, Walling discusses health and wellness in boys and girls, describing the proper upbringing for healthy young men and women and behavior expectations for both. Walling also elaborates on the extreme dangers of masturbation and non-penetrative sex in sections on male and female masturbation. Next, Walling discusses married life and the politics surrounding marriage. He details his opposition to abortion, his support of marital, heterosexual sex, and his warnings about being sexually experimental and excessive. The last part of Walling's book focuses on pregnancy and the care of infants, though he mentions other topics suh as sterility, maladies during pregnancy, and labor.

In “Part 1. Introduction,” Walling claims that before his book, many people were misadvised about sexual health matters by friends, quacks (false doctors), and medically inaccurate information in daily papers and journals. He claims that the evidence for the facts he presents in *Sexology* are derived from eminent European and American physicians, professors, lawyers, preachers, and other, what he refers to as, brilliant minds. He also claims that the book is based on medical evidence and warns readers that some will be critical of his self-proclaimed progressive views. The author also warns those hoping for libidinous, scandalous topics that his book will only cause them concern after readers learn about the danger and evils of living lives by acting too sexually.

The first few sections of Walling’s book focuses on the health and wellness of boys and girls and their maturation into young men and women. Following “Part 1. Introduction” comes “Part II. Boys and Young Men, Their Education and Training”, and “Part III. Girls and Young Women, Their Education and Training.” Walling opens the section on Young Women by claiming that American women are deteriorating and losing their femininity, becoming miserable and sickly, and states that errors of US society, like women spending less time at home, led to the poor condition of women. Walling explains that contrary to all other species, humans are not perpetuating their race with strong and healthy women, but rather unnaturally devolving. The author claims that preservation of the race is dependent on the physical improvement of what he terms the mothers of the race. Walling then details what he states are the dangers of women living in cities and attending educational lessons, stating that the overwhelming sights and sounds are poisonous and destroy what Walling refers to as the maidenly freshness and innocence of women.

Continuing in Part III, Walling elaborates further on gender expectations of women. He claims that women have an inherent, congenital love of dress and appearance that men do not possess. Additionally, Walling claims that women who are not married following their primary schooling years are rare exceptions to nature and those who are not be not able to secure eligible lovers must be too unattractive. According to Walling, the sole objective of a young girl should be to get married and create ideal children.

Walling concludes Part III by providing his criticism of the women's rights movements of the early 1900s, referring to women participating in the movements as an epidemic. Walling sums up the movements as involving a small group of women dissatisfied with their routine household lives. He emphasizes that the movements are a political threat, referring to the movements as a terrible engine of destruction. Walling claims that women are inherently impressionable and that those ideas cause women to wrongly view their lives with dissatisfaction. If a Women's Rights movement were to receive any attention, Walling claims it would cause women involved to lose their gender, abandon their roles as family makers, and pose a threat to the race, citing the possibility of increased divorce rates as one of the greatest potential threats. According to Walling, women cannot have the advantages of both sexes at once and need to conform to their prescribed roles in order for society to function properly. When mentioning the possibility of extending suffrage to women, Walling claims that it will cause women to intrude into politics, scheming for offices, and promoting what he identifies as child murder and unnatural repugnance to offspring. The chapter ends with a list of behavioral expectations for women, including serving as a wife, raising noble and righteous sons, training beautiful daughters with graceful character, and the statement that daughters should be educated as women and not as men, and prepared for household and nursery duties.

Next, Walling provides anatomical diagrams of male reproductive organs and provides medical explanations for why male masturbation is detrimental to male health in "Part IV. Masturbation, Male." Walling begins the section by stating that male masturbation is a shameful, criminal act with what he refers to as revolting consequences, the nature of which he does not elaborate on. In the section, Walling claims that abnormal male genital excitation at any age from infancy to elder years, regardless of the cause, could easily lead to prolonged uncontrollable sexual desire. In that section and throughout the book, he details his ideas and treats them as medical fact, agreed upon by the medical community.

In the fifth section of Walling's book, "Part V. Masturbation, Female", he discusses the apparent dangers of female masturbation. Walling explains his beliefs that women by nature are more secretive and timid, and explains why he believes girls boarding schools are dangerous and run by negligent administrators that overlook young girls introducing each other to masturbation, an act he identifies as a being evidence of a disorder in both genders. Walling also notes that female same sex romances cause girls to become depraved, according to Walling. Walling identifies some medical symptoms that he believes to be associated with masturbation, including weakness, absence of freshness and beauty, loss of color from complexion and lips, and loss of whiteness from teeth. Instead, Walling claims those who engage in masturbation become pale, puffy, flabby, spiritless, sad, have a dry cough, and have shortness of breath. Walling also claims that masturbation can cause women to develop nymphomania, a medical condition involving increased libido and hypersexuality.

The first next sections of Walling's book, he focuses on the health and wellness of men and women as they transition into mother's and fathers and have sexual intercourse. In "Part VI: The Rights of Offspring," Walling elaborates on his belief, and one he claims is widely agreed

upon in medicine, that children have a right to be born, and that conception is a God-given privilege that should never be questioned. In that section, he details his moral opposition to abortions, criticizing advocates for family planning and population management through birth control. He employs strong religious arguments for why abortion constitutes murder and asserts that women have no decision on whether or not they want to be a mother, as that is the primary duty of women.

Walling devotes "Part VII. The Physiology of Wedlock" to explaining some of what he referred to as medical facts that promote marriage between a man and a woman. He begins the chapter by describing a bride and groom consummating their marriage and describes the groom as a monster, forcing himself on the bride and beginning a cycle of continuing horror and loathing for their marriage. He explains that the information he provides in "Part VII" is meant to remedy and renew faith in one's marriage when lacking passion. Walling provides directions to men to reassure their wives and gain their trust to mend marriages, and directs them to assure women that men mean no violence or suffering but only reciprocal happiness for both husband and wife.

During Part VII, Walling also explains some of his views of the nature of man and woman. Men, he claims, are inherently hard, selfish, and tyrannical towards women. He also notes that while he believes men have a duty to respect a woman's temperamental conditions, women have a duty to maintain their inherent womanly reserve and let the man make all sexual approaches. Walling then details what he describes as disgusting, beastly, unnatural, and wrongful methods of preventing pregnancy, otherwise known as birth control. According to Walling, any form of birth control is physically injurious for both partners, though he does not provide any evidence. When describing onanism, or non penetrative sex, Walling notes that

going against nature can cause illness in both men and women, including diseases of the brain, kidney, heart, lungs, muscles, blindness and erectile dysfunction. Additionally, he says, if a woman is to engage in non-penetrative sex, she will almost certainly develop cancer of the womb. Walling claims he had high authority for that statement.

While continuing to justify penetrative intercourse among married men and women, Walling explains his scientific belief that contact of seminal fluid on the mouth of the womb inside the vagina is required in order to attain sexual pleasure for both men and women, and apparently necessary for safety of both partners. Seminal fluid refers to the male ejaculatory fluid containing sperm. He mentions an unnamed scientific property that explains his theory that without seminal fluid inside the vagina during arousal, the proper genital functions are not being performed and direct injury can result. Walling describes genital congestion that results from women not properly engaging in sex, and as a result, developing cancer and dying young.

Walling next details his beliefs about the extreme medical dangers of engaging in intercourse during a woman's menstrual period. He states that he need not dwell on or explain the dangers of such an act because he knew the reader and much of society would agree with him. Walling then describes his beliefs on menopause, the time when a woman's menstrual period ceases as she ages. When describing changes that accompany menopause, Walling claims that a woman's uterus shrinks, hardens, loses its softness and becomes harsh and dry. Walling claims that high rates of cancer in older women can be attributed to the unnatural effects of menopause.

In "Part VIII. Happiness in Marriage," Walling details how within marriage, women desire to be won in order to achieve domestic happiness. When commenting on a wife's eagerness for diamond gifts from her husband, Walling claims that the only science that female

ambition is capable of is the science of deciding what to wear. Walling argues that during the time of the book's publishing in 1904, young women were devolving and becoming less polished and thus unfavorable wives and mothers. Walling expresses his concern that marriages were being used by younger generations to promote lust and carnal attraction, and not a true Christian bond that outlasts fleeting superficial sexual attraction. Walling promotes the idea of a marriage grounded in Christianity as being what is natural for men and women and bringing both members closer to a Divine life ending. According to Walling, only Christian marriages can be permanently happy, citing the Old and New Testament of the Christian Bible.

Walling's "Part IX. Psycho-Physiological Comparison of the Sexes" serves as a larger scale comparison of the physical and psychological differences he claims exist between men and women. He describes physical differences among men and women, including head size, forehead depression, and torso shape. Because of a woman's smaller and more supple features, she is more adapt for domestic life that requires details and delicacy, according to Walling. He makes the claim that physical weakness of female anatomy provides evolutionary evidence that women are unfit to cope with certain life difficulties, including the hostile elements of the world outside the home.

When discussing the brain, Walling claims that women's brains have a more developed region towards the back of the head and less developed in the region at the front of the head, providing an explanation for why he believes women show more sentiment and less reason. Walling's theory also claims that women have more cellular tissue, causing them to appear more curvy and supple and also lubricating her organs to enhance physical movement. Walling also claims that the abundance of cellular tissue in women proves that they are less advanced in individual, personal development and destined to provide for other creations, like their offspring.

According to the chapter, though women more often live longer lives than men, they are usually more likely to develop health complications in the process of living for the creation of others.

According to Walling, the influence of reproduction on a woman dominates her entire existence. Walling details his theory that the female body is predominantly governed by the female reproductive organs and states his belief that the brain and other organs are interconnected and dependent on the womb. According to Walling, nerves connect the womb to the heart, lungs, brain, stomach, breast, lips, and throat, and if the womb ever became diseased, it would affect the attached organs. He then provides arguments that women are more excitable than men in response to sensation, similar to an electric spark on conducting material. Men by comparison, he claims, organically suppress sensation and can do so willfully.

Continuing in the section, Walling states his theory that men inherently are less attached to their offspring, stating that paternal love does not exist outside of promoting education and growth. He justifies that lack of sensitivity to his belief that a man's brain is more dense compared to a woman's more soft and voluminous brain. Continuing his theory, Walling claims that the anatomy of the female brain does not allow her to relate cause and effect, making it impossible for women to participate in metaphysical sciences and even concentrating on one task for extended time. As supportive evidence, Walling states that no woman has ever created a significant piece of music, play, or piece of art, claiming that only men are capable of creating genius. He states that the majority of women, naturally, are not intellectual, are physically inferior to males, and are weaker in character, and that if there was to be an exception, she would be a mistake of nature. He continues to evaluate many anatomical differences between men and women and justify their adaptive nature based on what would be viewed by some in the twenty-first century as sexist ideas.

In “Part X. Sterility,” Walling defines sterility as when an individual fails to supply his or her share of the procreating element, specifying that it is normally applied to women who are unable to become pregnant. He claims that male sterility is extremely rare and need not be mentioned other than what he unnatural conditions of the seminal fluid, or semen. Walling attributes the primary cause of sterility in young married couples to be excessive sexual indulgence, though he provides no evidence for that claim. Women, he claims, also commonly become sterile due to closure of the uterine neck, dysfunctional fallopian tubes and ovaries, and barriers within the vagina.

In the final third of the book, Walling details how to handle pregnancy and provides explanations and recommendations for during pregnancy and while raising children. In the opening of “Part XI. The Womb and its Appendages,” Walling states that he would gladly avoid the topic of female reproductive anatomy if he did not feel it was his duty to provide people with information about the location of the procreation of mankind. He provides anatomical descriptions of a normal women and normal body dimensions, provides diagrams, and provides brief definitions of terms for displacements of the womb. Walling claims that women who develop in warm climates, live in cities, read romance novels, or have discussions about romantic topics are more likely to begin puberty at a younger age. Walling details his understanding of the processes of puberty, ovulation, conception, and menstruation in the female body, and the associated congestion of blood that occurs in the womb region at these times.

“Part XII. Pregnancy and Its Symptoms” details the expectations and common medical signs of pregnancy. According to Walling, suppression of menstruation, excessive gas, the presence of milk in the breasts, and morning sickness are all the main symptoms of pregnancy. He outlines the stages of pregnancy two months at a time and lists out common symptoms at

each stage, including difficulty breathing, and vomiting. When providing advice to pregnant women, he states they should not run, jump, ride horses, dance, or submerge themselves in cold water, as well as avoid crowds, heated rooms, and excitement. Walling then addresses the apparent common worries of dangers and difficulties in bearing children, reassuring that all women were made to bear children and should not be preoccupied with those thoughts.

In Part XIII. Maladies During Pregnancy, Walling describes mental diseases that can affect a woman's pregnancy. Walling advises husbands whose pregnant wives suffer from mental illness during pregnancy to help their wives conquer their illness for the sake of their unborn child. He provides examples of things husbands can do to help their pregnant wives overcome mental instability during pregnancy, such going on leisurely walks and bringing home visitors like friends and family.

In "Part XIV. Labor. Occupation Of The Mother During Pregnancy," Walling describes the necessary preparations for expecting mothers and the process of labor. He provides an extensive inventory of supplies that the mother will need to have accumulated by the time the infant is born, including cotton night dresses, bandages, napkins, face towels, bedroom slippers, diapers, a baby basket with soap, and powder, explaining that women need to be prepared. Walling then makes the claim that women prefer to have men deliver their infant over a female birthing assistant became women feel safer in a man's hands and can rely on a man's courage during labor. The chapter then details the specific preparations for bed making and the room and accomodations for the physician during childbirth. Those include having warm water, a sponge, and lubrication oil.

The final three sections of the book are titled " Part XV. The Nursing and Bearing of Infants and Lactations,``"Part XVI. Adolescence," and "Part XVII. Marriage." For the remainder

of the book, Walling details how to raise proper boys and girls that fit into their natural gender roles and prepare them for marriage to a suitable spouse and emphasizes, taking measures to avoid corrupting youth with sexuality.

The book was originally published in 1904, but in a later reprint, the front eight pages of the book contained thirty endorsements for the book from many leaders in medicine, academia, religion, and government, showing that many supported and appreciated the book at the time of its publication. Reviews came from throughout the US, including from former president of Tufts University in Boston, Massachusetts, Frederick Hamilton, former governor of Nebraska, John Mickey, and former surgeon to the Young Men's Christian Association (YMCA), John Edgar Fritz. All featured reviews were from male readers, as the book was directed towards a male audience. Reviewers praised the book as being exceedingly valuable to both men and women and praised Walling for his honest tone and mission to warn his race of the dangers of sexual misconduct. Walling made claims in the book may be considered by some groups in the twenty-first century to be sexist and oppressive towards women, and many of Wallings seemingly factual and authoritarian statements were later disproved in medicine.

Sources:

1. "Deaths: William Henry Walling." *Journal of the American Medical Association.* 5 March 1910. https://books.google.com/books?id=bglHAQAAMAAJ&lpg=PA810&ots=J238WlcVDg&dq=william%20walling%20m.d.%20medico%20chirurgical&pg=PA810#v=onepage&q=william%20walling%20m.d.%20medico%20chirurgical&f=false
2. Walling, WIlliam H. "Abscesses; Adenomas; Adipose Tumors; Aneurysms; Callosities; Haemorrhoids; Torticollis; Specific and Malignant Diseases of the Rectum, and Ulcerations." *An International System of Electrotherapeutics.* London: F.A. Davis Company. 1984 https://books.google.com/books?id=5lBDAQAAIAAJ&lpg=PR23&ots=-

JTb0FPrug&dq=william%20walling%20m.d.%20medico%20chirurgical&pg=SL14-PA1#v=onepage&q=william%20walling%20m.d.%20medico%20chirurgical&f=false
3. Walling, William H. *Sexology*: *Family Medical Edition*. Puritan Publishing Company: Philadelphia 1904.
4. Walling, William H. "Some of The Uses of Electricity in Gynaecology," *The American Gynaecological and Obstetrical Journal.* New York, 1901. https://books.google.com/books?id=aJ4gAQAAMAAJ&lpg=RA1-PA122&ots=abMYEHjz68&dq=%22Eastern%20College%22%20of%20Gynecology%20philadelphia&pg=RA1-PA122#v=onepage&q&f=true

The other primary source used in this study is the book *Sexual Hygiene* by the Alkaloidal Clinic in 1901, similarly reflecting the ideas of some medical professionals surrounding sex, gender, and women's reproductive health during the late 1800s and early 1900s.

***Sexual Hygiene* (1901) by The Alkaloidal Clinic**

Horwitz, Rainey, "*Sexual Hygiene* (1901) by The Alkaloidal Clinic". *Embryo Project Encyclopedia.* Forthcoming Publication

The editorial staff of The Alkaloidal Clinic medical journal published *Sexual Hygiene,* a medical advice book about normal sexual behavior and physiology in 1901. The book was comprised of a collection of passages from other books, articles, speeches and documents surrounding sexual physiology and behavior, some documents not having been previously published. The book contains twenty-eight chapters on topics including sexual appetite, masturbation, incomplete or delayed intercourse, and impotence by which they meant the inability to achieve orgasm. Though the physicians and those who served as experts used seemingly factual scientific evidence to back up their claims, later scientific findings and a better medical understanding of male and female anatomy and physiology would disprove many

assertions. *Sexual Hygiene* was an early US discussion of sex in medicine, which provides twenty-first century readers with examples of historical medical misconceptions about sexual practices, male and female physiology, gender roles, and context for understanding reproductive medicine around 1901.

Sexual Hygiene was published in 1901 by the Clinic Publishing Company in Chicago and included ideas that were demonstrated through the twentieth century as medical misconceptions. At the time of the book's publication, women were unable to vote in the US, abortion and the use of contraception were criminal offenses, and many women were diagnosed with female hysteria, a catchall diagnosis for women experiencing symptoms ranging from headaches and shortness of breath to terse language and hyper sexuality. The book created by the Alkaloidal Clinic was written for an audience of primarily male doctors and provides context on the condition of reproductive medicine, sexuality and relationship psychology during the early 1900s. The Alkaloidal Clinic published a medical journal during the late 1800s and early 1900s that later became the *American Journal of Clinical Medicine*. In 1893 Johns Hopkins School of Medicine was established, reflecting a rise in scientific medicine and medical education in the US, and allowed for better understanding of the human body in ways that called into question some former medical practices. At that time, female sexual arousal was considered by doctors to occur only as a result of penetration, while external clitoral stimulation outside intercourse, for example through masturbation, was thought to cause adverse mental, physical, and moral consequences for women (SOURCE).

Sexual Hygiene comprises many works relating to sex, mostly from the Alkaloidal Clinic journal and the doctors that were involved with the journal. The first half of the book documents speeches given at a meeting of doctors, who were highly acclaimed in reproductive health

according to the book. The meeting was held on 28 November 1898 by the Alkaloid Clinic in Chicago, Illinois. Under the group name the Physician's Club, doctors and specialists met with the goal of providing expertise on sexual hygiene and practices, which were topics considered by many, including doctors, to be inappropriate and taboo, according to the book. The meeting discussing Sexual Hygiene was the largest attended meeting in the history of the club at the time (82) and the expert physician speakers were assigned topics prior to the meeting. Several speakers expressed that they felt someone more competent on the subject should have been selected to speak, while also claiming that they as physicians were the only people qualified to speak with authority on matters of sex (p.51). Those speeches and papers from the meeting were published in the Clinic journal and became widely popular, which led to their republication in the first half of the *Sexual Hygiene* book.

In the first half of the book, the "Physician's Club" discussed topics they name as follows: Sexual Appetite, Religion and Love, Sexual Frauds, Sexual Excess, The Effect of Coitus During Pregnancy and Lactation, Sex Problems in Education, Legal Aspects, and Educational Aspects. Those topics were each given a chapter in the book with the text being the transcript of the speech the physician presented at the meeting, and making up the first nine chapters of the book. Following a short Editorial Resume overview section in chapter ten, chapters eleven through twenty eight feature information compiled by the editors on the topics given the following names: Women Sexually, Imperfect Development of the Female Sexual Organs, Affections of the Male Sexual Organs Causing Impotence, Continence, Masturbation, Incomplete or Delayed Intercourse, Frequency of Intercourse, Prevention of Conception, Married Courtship, Posture, Artificial Fecundation, Management of Pregnancy, Diet to Influence Labor, Maternal Impressions, Determination of Sex, Restriction of Marriage, Sexuality Must Dominate,

and Zola's Last Novel, "Fecondite." Throughout both portions of the books, the editors cite many physicians throughout the US and compare the practices of many sexual health experts during the early 1900s.

In the Preface, the editors explain that the book's purpose is to educate doctors on how to instruct their patients to properly engage in marital coitus, a term meaning having sex when married. They state that the aim of the book is not to explain or invade the sacred ritual of married sex, but to treat sexual dysfunction and disease as medical diagnoses that require physician intervention. The editors state their ideas that without medical intervention untreated sexual irregularities can lead to family disagreements, self abuse by which they seem to have meant masturbation, adultery, divorce, suicide and murder (p. 7).

Following the Preface, Chapter One: "Preliminary Considerations" informs the reader that the physicians who wrote the book do not enjoy talking about sex; however it is necessary and a doctor's duty to deal with uncomfortable things when entering the medical profession and discuss them plainly, sensibly and scientifically (p.11). The chairman of the meeting states that the happiness of the world is dependent on the happiness of married couples and their sexual function, which is why the group has met and decided to try to normalize the subject in medicine.

In Chapter Two, physician Charles S. Bacon presented "The Effects of Malformation and Derangements in the Genital Organs of Woman on Her Sexual Appetite." He asserted that a woman's sexual appetite could be increased causing nymphomania, decreased causing abstinence, or perverted causing homosexuality, fetishism, sadism, and desire for masturbation (p.19). According to Bacon, after a woman goes through menopause, her sexual appetite disappears (p.21). When discussing genital malformation, Bacon claims that eighty percent of

women have a condition that causes their clitoris to be excessively concealed by the prepuce, or clitoral hood, causing inability to become sexually aroused from intercourse. Bacon notes that many women have had to have that problem surgically corrected to increase sexual appetite. He also claims that abnormalities like congenital defects or acquired diseases like gonorrhea can cause what he understood to be increased vascularization and itching sensations that cause women to accidentally masturbate and result in nymphomania, or an excessive and uncontrollable sexual desire in women. Those conclusions were not upheld in twenty-first century medicine (p 26-27).

Chapter Three features the speech by Geoffrey F. Butler who the Physician's Club viewed to be an expert on his topic, "Sexual Desire As Influenced by Religion and Emotion." Butler states that love is a manifestation of sexual instinct and is the animating spirit of the world (p. 29). Additionally, he claims that falling in love is a sacred aspect of Christianity and that sex is the root of passion out of which true love grows (p.35). While Butler defends the sacredness of upholding religion, he also notes, and later experts in the book agree, that women are more easily influenced by religious beliefs than men in regards to chastity and sexual modesty.

In Chapter Four physician Joseph Zeisler spoke to the Physician's Club on his assigned subject, "The Sexual Act: Frauds in the Conjugal Embrace." The term conjugal embrace was a term used during the late 1800s to refer to sexual intercourse between married men and women. He discussed what he labelled as three main frauds, the first being having sexual intercourse with a wife without the intention to create offspring, which Zeisler and his peers viewed as a violation of the vow of marriage (p.40). According to Ziesler, if a woman is not ready to have children, then she is not ready to be married (p.38). The second fraud is preventing conception, and Ziesler cities that neurologists would attest to the danger for both men and women when a husband

withdraws his penis during intercourse to prevent childbearing. The last and most important fraud is the use of wives by husbands as an instrument of sexual enjoyment and Ziegser states that it is the physician's job to be the most informed and educate husbands on how to sexually please their wives(41).

Chapter 5 surrounds "The Results of Sexual Excess or Continence; Sexual Misinformation and Quack Literature," presented by physician William T. Belfield. Belfield claimed that parents have responsibility to properly educate their children about sex and not leave them susceptible to the influence of quacks, or people posing as medical specialists without a license that would encourage them to behave outside sexual norms. He also stated that men are inherently sexual and that women are far more likely to be capable of remaining abstinent and grow to maturity without sexual feelings (p.48). Beltfield also stated that men can suffer health consequences of too much sex such as chronic prostate and seminal vesicle inflammation, which he notes could also be connected to men having gonorrhea.

In Chapter 6: "Coitus During Pregnancy and Lactation," physician Arthur Cotton describes what he understood to be the harmful effects of having sex while pregnant or lactating. According to Cotton, having sex while pregnant can cause abortion from over excitement of the uterus, septic infections in the sexual organs, and deterioration of the nutritional quality of breast milk (52). He also claimed that it could cause epilepsy, idiocy, and cerebral palsy in infants, as well as the infant being malnourished because the pregnant woman exhausted biological resources by engaging in intercourse. He advised that husbands and wives sleep in different beds during that time period.

Chapter 7: “Sex Problems in Education” was led by physician Paul Carus. Carus encourages telling children the truth about sex without too many details to lead them to have erotic thoughts, encouraging physicians to use their best judgment when advising parents.

During Chapter 8: “Legal Aspects,” lawyer A.S. Trude was asked to comment on the temptation of illicit sex with married women, stating that it is a powerful force. He stated that men commit crimes like murder because of their desire for a woman (p.70), but he did not address that it was a problem or provide a solution.

In Chapter 9: “Educational Aspects,” the speaker referred to as Professor Wheeler explained that science teachers in schools could help students by teaching about sex through biology lessons without making the content erotic. Physician Rachel Hickey Car, one of the few female doctors at the meeting, began a discussion on the topic at the meeting, expressed her concerns, and presented evidence from her experience that it is possible to educate young women on sexual hygiene without hurting them mentally and physically by encouraging them to ask questions about anatomy. Dr. Frank A Stahl, another physician expressed his skepticism regarding Car’s findings and wondered if her success could be replicated among city girls, arguing that less high bred women could not handle learning information about sex (p74). Dr. Chauncey W. Courtright also commented on the subject, arguing that boys should receive an education about when they should have intercourse and how to not molest women, while also claiming that a man has a right to a woman’s body when they are married (p 79). After Dr. Cotton suggested that girls should be taught how to protect themselves from a man’s moods, the chairman ended the meeting.

At the conclusion of the Physician’s Club meeting portion of the book, the editors wrote Chapter 10: “Editorial Resume” as a response to the popularity of the Sexual Hygiene papers

from the meeting in Chicago that had been published in the Alkaloidal Clinic journal. They claimed that the spreading of that knowledge is important because, according to the Clinic physicians, less than fifty percent of married women had any pleasure in sexual intercourse during the time of publication in 1901(p. 85). The editors then explain their conclusive ideas on how to better bring a woman to orgasm, stating that the size of the penis does not matter and penetration should always cause sexual excitement unless the woman's vagina has been overly-used (p. 87). Lastly, the editors claim that when a woman gets married, she surrenders the right to approach her body sexually to her husband and if a woman's anatomy does not permit that guaranteed right, for example with gynecological obstructions not permitting intercourse, then the editors claim that there is grounds for divorce.

Chapters eleven through twenty-eight highlight individual issues selected by the editorial team, including "Women Sexually" and the "Imperfect Development of the Female Sexual Organs." In those sections, the editors inform the physician readers that unhappiness at home is partially due to a sexually unsatisfied wife (p. 109), and happy sex lives lead to healthy children that are born out of love. Illicit sexual behaviors, like infidelity and masturbation, the editors argue, leads to moral decomposition and female hysteria. When discussing the malformation of female reproductive organs in relation to irregular or absent menstrual cycles, the editors recommend to physicians that applying electrical currents directly to the womb can aid anemic, or iron deficient, women by causing bleeding. That bleeding might have been viewed by doctors in the early 1900s as the return of regular menstruation, but doctors in the twenty-first century doctors may regard it as actually caused by the procedure and not related to a woman's menstrual cycle (need citation). The editors also cite surgical procedures to free the clitoris from being overly hidden by the prepuce, or clitoral hood, to increase a woman's sexual excitation,

comparing the procedure to a male circumcision, as is mentioned multiple times throughout the book.

The following sections detail what the authors refer to as "Affections of the Male Sexual Organs Causing Impotence, Continence, or abstinence, and Masturbation." When discussing factors that lead to male impotence, or failure to achieve an orgasm, the editors attribute the problem to an abnormal prostate irritability that can be identified by using a metal sound, or thin metal device, passed through a man's urethra to locate areas of irritation. A physician Geoffrey C. Pizer is credited as saying male sexual weakness usually originated in the urethra (118). He also claimed that sources of male impotence is masturbation, being overly sexually active, or contracting gonorrhea. To treat weak erections, the physicians recommended using electrical current applied to the urethra, eating Yohimbine that is a supplement originating from tree bark, as well as injecting metal-based medicines to the prostate. When discussing the ability to achieve many orgasms, Pizer claimed that a woman who had thirty orgasms a day without any harm to her body or mind did so by eating raw eggs, which he predicted supplied her with living protoplasm that enabled her to have such endurance (125).

In the section surrounding "Masturbation," the editors warn parents against letting their children eat lots of meat, eating late at night, and watching for stains in their sheets as a sign that their children are masturbating. According to a source cited by the editors, torn clothes, bloody noses, and black eyes are an essential part of a young boy's development and without them he will suffer from being raised like a girl (140). As stated throughout the book, the editors claim that masturbation causes deterioration of the mind, body, and morals of young men, but they do not go into detail about the effects of masturbation in women.

In the following section, the editors comment on "Incomplete Or Delayed Intercourse," referring to the act as onanism. The editors state that some women attempt to prevent completion of intercourse out of fear of pregnancy, and comment that it is wrong for women to seek pleasure without paying for it, as they say, or not assuming their procreative responsibility (143). They claim that women who have never experienced an orgasm spread those beliefs, and the editors claim preventing or delaying proper intercourse can cause physiological problems for sex organs. As a solution, the editors recommend adequately preparing wives with genital caressing before intercourse.

When discussing frequency of intercourse, the physician editors of the book argue that frequent sexual activity is healthy because it allows for the emptying of semen receptacles. The editors comment that sex should be an organic and spontaneous act to satisfy natural sexual appetite and not involve the fear of childbirth. The authors claimed to have written the section in response to sex-less women who claimed that sex should be limited to procreation when wanted and intended (155).

The section on prevention of conception details how married couples could prevent becoming pregnant, which the editors claimed is only acceptable when another pregnancy will cause a woman's health to deteriorate. The physician editors claimed that condoms are unbearable and physically injurious to both men and women because they could cause electrical hindrance by being made of rubber and not conducting electricity. After stating that preventing conception is vile, disgusting and morally debasing, the editors claim that when it is absolutely necessary it is permitted as a choice of a lesser evil. The editors cite an 1897 article from the medical journal *The Medical World* listing the following contraceptive options: an aluminum button placed on the cervix, a sponge with a string attached soaked in acid and placed in the

vagina, castration, limiting and timing intercourse, and lastly, getting a divorce and vacating the position for another woman who is willing and able to fulfill a wife's responsibilities and enjoy her privileges (190).

In the next chapters, the authors discuss what they refer to as married courtship. When discussing marriages in which the husband and wife have stopped having sex, the physician editors recommend that men clean there beards, brush their teeth as to not smell like tobacco and alcohol, and do what they can to not seem repulsive to their wives and appear more desirable. They recommend observing what time of the month she feels most erotic and taking advantage of that time.

On the topic of posture, or sex positions, the editors state their ideas that certain sexual positions can escalate a wife's orgasm while delaying that of a husband. They rationalize that when men are positioned on top, gravity causes men to achieve orgasm faster than if they were on their back or side (203). The physicians also state their understanding that anatomical defects can cause sexual problems with positions. They stated that if a woman's uterus was located to low in the vaginal canal, it could cause the penis to become embedded in loose, bagging folds of the vagina away from the mouth of the uterus, or if a woman's vaginal canal was too long for the penis, could also preventing pregnancy (206). The physicians provide sixteen examples of sexual problems that can be corrected by change in posture.

Sexual Hygiene was one of the first attempts made by US physicians to discuss sex in medicine in a frank and factual way without speaking modestly surrounding a controversial topic, according to the editors. During the early 1900s, significant medical advancement and innovation occurred in Chicago, Illinois, after the founding of several medical schools in the area

including Northwestern University School of Medicine in 1859 and The University of Chicago School of Medicine in 1899, which brought many doctors to the area. Experienced physicians provided the various documents and speeches used in the book and their knowledge was perceived as expert by the medical community (SOURCE). The editors of The Alkaloidal Clinic made claims in the book that may be considered by some groups in the twenty-first century to be sexist and oppressive towards women and men, and many of the authoritarian statements provided in *Sexual Hygiene* were later disproved in medicine.

Sources:

1. The Alkaloidal Clinic, *Sexual Hygiene.* Chicago: The Clinic Publishing Company, 1901

Both Walling's book and the book published by the Alkaloidal Clinic illustrate examples of medical thinking when women's rights and autonomy were not as respected and upheld as they are in the twenty-first century. Those books provide insight into how medicine understood women and their bodies and the origin to gendered practicing, propagation of medical misconceptions about female anatomy and behavior, and ideas about sexual morality.

III. Factor 1: Gendered Expectations in Medical Practice:

Physicians of the late 1800s and early 1900s were heavily influenced by traditional gender ideas and roles while practicing medicine. Originating in ancient civilizations, similar ideas about women's bodies and the influence of the womb on a woman's physiology and behavior have persisted throughout time (Rosenberg and Smith-Rosenberg). The following

article illustrates the history of wandering womb ideology and the influence it may have had on women's reproductive healthcare.

Wandering Womb

Horwitz, Rainey, "Wandering Womb". *Embryo Project Encyclopedia.* Forthcoming Publication

Wandering womb was the idea that a woman's womb, or uterus, was living separately from the woman and had the ability to travel throughout the woman's body, thereby causing many medical diseases. The idea originated in ancient Egypt and ancient scholars like Hippocrates supported it. Belief in wandering womb furthered the study of female hysteria as a generic diagnosis for women's health issues. Women exhibiting common symptoms like mood changes or shortness of breath have been diagnosed with female hysteria worldwide throughout history. In the twenty-first century, scientific and medical communities agree that a woman's uterus remains in the same position in the lower abdomen for her entire life. The idea of wandering womb contributed to studying and treating women's uteruses as the cause for most of women's illnesses, which led to the term female hysteria and facilitated a limited understanding of women's bodies.

The idea of the wandering womb provided an explanation for a wide range of symptoms experienced disproportionately by females. General beliefs about wandering womb and the symptoms it caused were similar throughout societies across the world for centuries. According to a historian, Laurinda Dixon, the logic behind the idea of the wandering womb was that symptoms varied depending on the position of the womb in the woman's body. For example, loss of breath and choking, which physicians of the twenty-first century might attribute to being

symptoms of asthma, were attributed to the uterus obstructing the flow of air in the woman's body. Likewise, some physicians attributed nausea and anxiety to the uterus applying pressure to the heart, and headaches, drowsiness, and lethargy to the uterus traveling to the head. Additionally, it was a common assumption that when the uterus traveled to other parts of the body, it caused organ failure, swollen feet, back pain, loss of appetite, and insomnia.

Physicians could diagnose women with wandering womb when they reported any variety of symptoms. Those symptoms included, but were not limited to, headache, toothache, heaviness in the limbs, severe cramping, difficulty breathing, desire for clitoral stimulation, hyper-promiscuity, mood-swings, nausea, anxiety, drowsiness, loss of appetite, aging, back pain, swollen feet, cancer, organ failure, endometriosis, or abnormal heavy menstrual bleeding, heart disease, and what are now considered as symptoms of depression, schizophrenia, and other psychological disorders. Relatedly, physicians linked many of those symptoms to diagnosis of hysteria, which came from the idea of the wandering womb.

While there is disagreement over whether the concept originated in ancient Egypt or Greece, some of the first mentions of the wandering womb came from the 1800 BC *Kahun Gynaecological Papyrus* in ancient Egypt. That document remains one of the oldest surviving medical documents in the world and provides detailed symptom descriptions, diagnoses, and treatments for a wide range of female health disorders, which ancient Egyptian doctors believed the uterus caused. The text mentions that if a woman was feeling ill, her uterus was likely displaced. Many of the ancient Egyptian treatments for those ailments in women involved fumigating a woman's womb with oils and steam to coax the womb back to its proper location in the body. To treat hysteria and wandering womb, some physicians prescribed the ingesting of

beer, excrements, or other components to repel the wandering womb away from the lungs and heart and reset it to its proper position in the lower pelvic region.

According to Thompson, societies throughout history believed that if a woman's womb, or uterus, was not satisfied by intercourse or becoming pregnant, the uterus would leave the pelvis and wander throughout the body. That idea reinforced the cultural standard of heterosexuality in most societies and allowed for older men to marry women less than half their age for sexual intercourse to properly align and position the uterus in its natural spot in the pelvis, thereby preventing wandering womb and dangerous diseases. According to Thompson, in some instances, physicians used physical force to allegedly push the womb back into place.

Ancient Greek scholar Hippocrates wrote on perceived women's diseases during the fifth century BC and contended that women were inherently phlegmatic, or relaxed and peaceful, and that water dominated them. Because of that, Hippocrates hypothesized that regular sexual intercourse was required to keep the womb, or uterus, healthy and moist, and that a dry womb would wander throughout the woman searching for moisture. Some theories of the wandering womb, though not all, involved the womb being independently conscious. He wrote about the womb as alive and separate from the woman. Hippocrates also wrote that the womb had an inherent desire for childbearing and intercourse. He wrote about epilepsy, a medical condition that causes sensory disturbance, seizures, and potentially loss of consciousness. Hippocrates argued that in women, epilepsy came from the uterus. However, physicians of the twenty-first century assign the cause of epilepsy to a neurological disorder caused by abnormal electrical activity in the brain.

Mental health researchers like Cecilia Tasca credit Hippocrates with coining the term hysteria in women's medicine. The ancient Greek word for womb is *hustera,* which means the

lower part of a woman's anatomy. Due to the idea of a displaced womb causing many diseases, hysteria became an all-encompassing term to describe many female behaviors and ailments. According to scholar Lana Thompson, for over 4,000 years hysteria was a diagnosis for women who behaved outside of desirable social norms and experienced any one of many physiological ailments. After the wandering womb theory lost credibility within the medical profession, physicians no longer used it as a medical diagnosis. However, the idea of a connection between hysteria and women's mental diseases persisted for decades after.

In agreement with Hippocrates, the ancient Greek physician Aretaeus of Cappadocia also stated his ideas that the female womb was analogous to an animal within an animal and that the womb preferred fragrant smells and disliked unpleasant smells. While many ancient Greek physicians agreed that the wandering womb was the cause of most female pathologies, some still disagreed. Greek physician Soranus argued that a woman's uterus did not move throughout her body and did not have animalistic qualities that would attract it to fragrant smells. He instead claimed that aromas were relaxing and caused the woman to not constrict her muscles, alleviating some symptoms of hysteria.

The ancient Greek scholar Aristotle, who lived during the fourth century BC, greatly influenced scientific thought concerning the female body, and also contributed to the concept of the wandering womb. Aristotle popularized the idea that women were incomplete or mutilated versions of men and that women were inherently inferior to men in every way. According to Thompson, that philosophy influenced the explanation of female illnesses and behaviors as being due to the flawed and weak nature of women, as well as the unpredictability and harm of the wandering womb. In his *Nicomachean Ethics,* Aristotle made the argument that women should

be excluded from politics because of the perceived emotional nature of women and the defiance of the womb during menstruation.

Throughout the first and second millennia, others documented ideas related to the wandering womb. According to historian Charles Singer, after the fall of the Roman Empire around 500 AD, there was strong religious influence in medicine, and religious belief became a central component of learning about the body. Originating in Europe during the Middle Ages, studies of humans were grounded in Christian doctrine concerned with soul, and for a time, many physicians abandoned the study of anatomy and human bodies. According to Dixon, men dominated gynecology. Dixon claims those physicians combined beliefs about the wandering womb and mystical religious beliefs when practicing medicine.

According to Christian doctrine, a womb wandered throughout a woman's body, and the womb itself was susceptible to demonic possession, causing physical and mental illness. Several medieval Christian prayers include verses aimed at expelling demons from a possessed womb. In contrast to Hippocrates's view that the womb traveled in search of moisture, justifying marriage and heterosexual intercourse as a treatment, medieval physicians attributed the cause of wandering womb to the woman having a surplus of soiled female seed, or dysfunctional reproductive material. That explanation agreed with Christian values emphasizing the importance of a woman maintaining her chastity or virginity. Physicians and scholars in medieval Europe wrote that wandering womb and a woman's susceptibility to womb demonic possession served as evidence of the existence of witches. Officials accused and tried many women, especially widows and single women, for crimes of witchcraft and considered them dangerous to be near due to the potential threats of their wandering and possessed wombs.

During the Renaissance Period following 1300 AD, studies shifted from Christian, spirit-based medicine back to human anatomy, and people continued to adhere to the idea of the wandering womb. A French physician, Ambroise Paré lived during the sixteenth century and wrote his ideas on the relationship between the womb and female hysteria. Paré wrote that a woman's uterus wandered throughout her body, becoming strangled and swollen and having the potential to travel to a woman's chest and cause shortness of breath. Paré considered the wandering womb to be the cause of female hysteria through lack of intercourse and a surplus of what he called female seed. Following his argument, women require intercourse to maintain normal female seed levels. During the seventeenth century, physician William Harvey wrote his beliefs on female anatomy, claiming that women's own biology enslaved them and forced them to carry an insatiable, ferocious, and animalistic uterus. During the eighteenth century, physicians continued assigning the source of female health and behavior issues to a displaced uterus. One physician, R. James, informed other physicians that if a woman was full of blood and moisture and had not given birth, the cure was for her to get pregnant, and many physicians prescribed marriage as treatment for improving symptoms of hysteria.

Even though arguments in favor of the wandering womb started to decline following the seventeenth century with the Scientific Revolution, some similar ideas persisted in the US. During the 1800s, women would describe themselves as being "womby" or suffering from "wombiness" to describe feeling abnormal or ill. Arguments in favor of the wandering womb lost credibility as medicine advanced that proved the theory incorrect. With the use of medical devices like X-rays and ultrasounds, physicians were able to view the uterus inside a woman's body and see that it did not move from its original position in the pelvis.

The medical and scientific community of the twenty-first century agrees that a woman's uterus remains in the same position for her entire life and hysteria is no longer a medical diagnosis. For many years, doctors used the wandering womb theory to diagnose hysteria. According to Thompson, widespread belief in the wandering womb caused physicians to view women and their bodies as inherently flawed and requiring medical intervention for proper functioning. She claims that misconception carried through much of human history and influenced how traditional patriarchal societies viewed and treated women and their liberties. The idea of the wandering womb helped justify the idea of female hysteria. The word hysteria is still present in the language of the twenty-first century with words like histrionic and hysterical, which mean dramatic and having uncontrollable emotions respectively. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, or DSM-5, categorizes hysterical symptoms under multiple mental disorders that do not only occur in women.

Sources:

1. Aristotle, W. D. Ross, and Lesley Brown. 2009. *The Nicomachean ethics*. Oxford: Oxford
University Press.
2. Dixon, Laurinda. *Perilous Chastity: Women and Illness in Pre-Enlightenment Art and Medicine.* New York: Cornell University Press. 10 July 1995. https://www.amazon.co.uk/Perilous-Chastity-Illness-Pre-enlightenment-Medicin/dp/0801430267
3. Fant, Maureen B, and Mary Lefkowitz. *Women's Life in Greece and Rome: A source Book in Translation.* London: Bloomsbury Publishing. 28 July 2016. https://books.google.com/books?id=EAoyDAAAQBAJ&dq=Aretaeus+of+Cappadocia+on+the+whole+the+womb+is+like+an+animal+within+an+animal
4. Faraone, Christopher A. "Magical and Medical Approaches to the Wandering Womb in the Ancient Greek World." *Classical Antiquity 30*, no. 1. 2011. https://www-jstor-org.ezproxy1.lib.asu.edu/stable/10.1525/ca.2011.30.1.1?seq=1#metadata_info_tab_contents

5. Lefkowitz, Mary. “The Wandering Womb.” The *New Yorker*. 26 February 1996. https://www.newyorker.com/magazine/1996/02/26/the-wandering-womb
6. Meek, Healther. “Of Wandering Wombs and Wrongs of Women: Evolving Concepts of Hysteria in the Age of Reason,” *English Studies in Canada* 35:2-3 June 2009, p.109.
7. Salazar, C F. “Hippocrates’ Woman: Reading the Female Body in Ancient Greece.” *Medical History*. 2001. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1044375/
8. Schleiner, Winfried. "Early Modern Green Sickness and Pre-Freudian Hysteria." *Early Science and Medicine*14, no. 5 (2009): 661-76. http://www.jstor.org/stable/20617822 .
9. Tasca, Cecilia et al. “Women and hysteria in the history of mental health” *Clinical Practice and Epidemiology in Mental Health*. 19 October 2012. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3480686/
10. Thompson, Lana. “The Wandering Womb: A Cultural History of Outrageous Beliefs About Women.” New York: Prometheus Books. 1998. https://books.google.com/books?hl=en&lr=&id=66H_bRK5JJQC&oi=fnd&pg=PA1&dq=wandering+womb&ots=z-Ru39KzLJ&sig=PA_LISYnMNE5VWuFJtKQokd8iXw#v=onepage&q=wandering%20womb&f=false

Wandering womb ideology provided a foundation for physicians understanding women’s bodies in gendered ways and formed a basis for doctors to utilize hysteria as a diagnosis. As has been stated, many external symptoms and behaviors constituted as symptoms of hysteria and the “catch-all” nature of the diagnosis may have interfered with women receiving adequate reproductive medical care. Hysteria may also have been used by doctors as a way to sweep women’s health concerns “under-the-rug” and prioritize critical thinking, resources, and research efforts towards male health concerns. Wandering womb not only influenced how physicians thought about women’s bodies, but the intertwined, gendered ideology also influenced medical practice.

The 1800s was a time when some women began to question the traditional, constricting roles reserved for women. It is naturally possible that some men many have felt their authoritative role in society threatened and were hopeful to preserve existing social relationships between men and women (Rosenberg et al). According to Rosenberg and Smith-Rosenberg, in

some cases, male authorities, including physicians, "employed medical and biological arguments in order to rationalize traditional sex roles as rooted inevitably and irreversibly in the prescriptions of anatomy and physiology" (Rosenberg et al).

In the medical books published by Walling and the Alkaloidal Clinic, licensed physicians gave examples of medical advice and diagnoses that were heavily based in gendered, scientific thinking of the 1800s and early 1900s. Characteristics like nurturing, intuition, morality, domesticity, passivity and affection were thought by most Victorian physicians to have a deeply rooted biological basis and were used as scientific arguments to explain an legitimate women's inferior role in society (Thompson). Physicians like Walling made authoritative claims that women have tendencies to be more timid and secretive while men are inherently hard, selfish, and tyrannical towards women by nature. Under Walling's medical theory, men had an obligation to respect a woman's inherent temperamental conditions, while women had a duty to maintain their inherent womanly reserve and let men make all sexual approaches (Walling, *Sexology*). Additionally, Walling claimed that women had inherent, biological desire to be won in order to achieve domestic happiness. Spreading those beliefs in his publications and into the medical community may have influenced other physicians to agree with his conclusions and practice similarly with their female patients.

Walling also employed other physiological and evolutionary "evidence" to support his ideas that women were biologically inferior to men in many ways. He argued that women are naturally more adapted for domestic life and pointed to the physical weakness of female anatomy as evolutionary evidence that women are unfit for what he believed were the hostile elements of the world outside the home (Walling, *Sexology*). When commenting on the dangers of women living in cities and attending educational lessons, according to Walling, exposing women to the

overwhelming sights and sounds is poisonous to their mind and body and will destroy what Walling refers to as the maidenly freshness and innocence of women (Walling, *Sexology*). Walling's other pseudo-scientific, authoritative claims include claiming that women's brains have a more developed region towards the back of the head and less developed in the region at the front of the head, providing an explanation for why he believed women show more emotions and less reason (Walling, *Sexology*). According to Walling's medical expertise, women were often likely to develop health complications in the process of living for the creation of others and dealing with energy conservation. Walling continues discussing how the anatomy of the female brain does not allow women to relate cause and effect, making it impossible for women to participate in metaphysical sciences and concentrating on one task for extended time. He supports this theory by stating that no woman has ever created a significant piece of music, play, or piece of art, claiming that only men are capable of creating genius (Walling, *Sexology*):

> "He claims that women have an inherent, congenital love of dress and appearance that men do not possess. Additionally, Walling claims that women who are not married following their primary schooling years are rare exceptions to nature and those who are not be not able to secure eligible lovers must be too unattractive. According to Walling, the sole objective of a young girl should be to get married and create ideal children."
>
> Horwitz, Rainey, "*Sexology* (1904) by William H. Walling ". *Embryo Project Encyclopedia.* Forthcoming Publication

In his own medical practice, Walling promoted his understanding that the majority of women, inherently, are not intellectual, are physically inferior to males, and are weaker in character, and that women who are strong and intellectual were a mistake of nature (Walling, *Sexology*).

Walling not only comments on the deterioration of women but also provides medical expertise discussing male development, claiming that in order for boys to develop properly, they must engage in violent behavior like fighting and physical labor in order to avoid developing like

girls (Walling, *Sexology*). However untrue this would be proven to be, Walling and other physicians of his time propagated gendered expectations to their patients and disseminated their seemingly expert views to other physicians who potentially emulated their practice.

In *Sexual Hygiene* the physician members of The Alkaloidal Clinic made similar claims about women's reproductive health, with a focus on marital intercourse. The physicians and experts make various claims that devalue women in society, including the editors claiming that when a woman gets married, she surrenders the right to approach her body sexually to her husband and if a woman's anatomy does not permit that guaranteed right, for example with gynecological obstructions not permitting intercourse, then the editors claim that it is permissible for the man to divorce the woman. The list of acceptable forms of contraception published in the 1897 journal *The Medical World* further reflect the inherent sexism in women's sexual medicine and lack of autonomy that some physicians thought women should have:

> "an aluminum button placed on the cervix, a sponge with a string attached soaked in acid and placed in the vagina, castration, limiting and timing intercourse, and lastly, getting a divorce and vacating the position for another woman who is willing and able to fulfill a wife's responsibilities and enjoy her privileges"
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> The Alkaloidal Clinic, *Sexual Hygiene.* Chicago: The Clinic Publishing Company, 1901.

Walling's gendered medical practice included making political comments about women, further emphasizing the role of gender bias and sexism in reproductive medicine during the late 1800s and early 1900s. Whether it be based in scientific thought or that some physicians sought to disadvantage women, Walling made claims on his opposition to feminism and increasing women's freedoms:

> "According to Walling, women cannot have the advantages of both sexes at once and need to conform to their prescribed roles in order for society to function properly. When mentioning the possibility of extending suffrage to women, Walling claims that it will

> cause women to intrude into politics, scheming for offices, and promoting what he identifies as child murder and unnatural repugnance to offspring. The chapter ends with a list of behavioral expectations for women, including serving as a wife, raising noble and righteous sons, training beautiful daughters with graceful character, and the statement that daughters should be educated as women and not as men, and prepared for household and nursery duties."
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> Horwitz, Rainey, "*Sexology* (1904) by William H. Walling ". *Embryo Project Encyclopedia.* Forthcoming Publication

Within a male dominated medical field, there may have been less urgency to make discoveries about women's bodies. Walling and the physician members of the Alkaloidal clinic were licensed and trusted women's health specialists. Their commentary on what they as experts deemed appropriate and healthy for women and men reflects how much nineteenth century ideas about gender crossed over into medicine, and may have persisted today. The lack of knowledge and exploration into understanding women's bodies likely influenced the medical care women received from their physicians and also may have created some medical misconceptions about female anatomy and behavior.

IV. Factor 2: Scientific and Medical Misconceptions About Female Physiology and Behavior

Prior to the twentieth century, there were fewer ways to elucidate the complexities of female reproductive anatomy, despite the fact that autopsies became common before that. During the late 1800s and early 1900s, physicians gave less attention to the details of reproductive anatomy and its functions compared to other medical specialties (Horwitz, "Non-medical Origins"). With less authoritative evidence and without the same high standard of scientific research we have in the twenty-first century, many physicians came up with their own

hypotheses surrounding female reproductive anatomy and function and published their ideas as fact (Starr). Many of their theories were informed by the scientific knowledge of the time as well as the belief systems of the societies in which physicians members.

Throughout the 1800s and early 1900s, physicians emphasized a woman's reproductive utility over her autonomy and some made it clear that though it may not be fair to women, many physicians believed women were doomed to suffer as a consequence of their biology (Rosenberg et al). According to Rosenthal et al, physicians in the nineteenth and early twentieth centuries saw women as prisoners of their active reproductive system, including gynecologist Charles Meigs, who stated in 1847 that a woman is "a moral, a sexual, a germiferous, gestative and parturient creature" (Rosentberg et al). Similarly, in 1870 another physician wrote that it seemed God had designed the female body as being built around the uterus (Rosenberg et, al). According to Walling, the influence of reproduction dominated a woman's body. Walling's utero-centric discussion of female anatomy asserted that the brain and other organs were interconnected and dependent on the uterus, ideology reminiscent of wandering womb even in the early 1900s.

During this time period, physicians had different ideas about menopause, menstruation and pregnancy and lactation. Without providing evidence other than the agreement of his peers, Walling asserted the perceived dangers of having sex during a woman's menstrual period. He warned physicians that he believed the high rates of cancer in older women could be attributed to menopause being an unnatural process and having unnatural effects on a woman's body, like what he believed was the shrinking, hardening, and drying of the uterus. In *Sexual Hygiene* physician Arthur Cotton described what he understood to be the harmful effects of having intercourse while pregnant or lactating. According to Cotton, sex while pregnant over excites the uterus, potentially causing an abortion, septic infections in the reproductive organs, and

deterioration of the nutritional quality of breast milk. He also stated that sex while pregnant could exhaust biological resources, causing epilepsy, idiocy, and cerebral palsy in infants, as well as the infant being malnourished (Alkaloidal Clinic, *Sexual Hygiene*).

Physicians in the 1800s and early 1900s also had a different understanding of female arousal and suggested several theories that may have influenced medical thinking in women's sexual medicine. Walling shared this rationale with other physicians during the turn of the 1800s, who commonly understood that the female nervous system was more delicate, prone to overstimulation, irritable, and more dominating compared to the male nervous system (Rosenberg et al). Since it was thought that the uterus, peripheral nervous system, and spreading of emotions dominated the female consciousness while the brain and intellect dominated male consciousness, physicians rationalized that women should be expected and encouraged to display more feelings and excitability than men, because it was inherent in female biology (Rosenthal et, al). Men, Walling claimed, could organically suppress sensation willfully. Walling compared women's excitation to an electric spark with her nervous system working like a conductive metal material, a metaphor that reflected the increase in understanding of electricity during the early 1900s and the harnessing of electricity into machines and technologies in society and medicine (Starr).

In the Alkaloidal Clinic's discussion of female arousal, physicians recommended what can be understood in the twenty-first century as unnecessary surgical remodeling of the female genitals to further expose the clitoris. Physicians also commonly made authoritative claims that women were unable to experience sexual arousal without vaginal penetration. Various physicians in attendance at The Physician's Club meeting of the Alkaloidal Clinic also commented that women were susceptible to becoming victims of sexual excess and developing uncontrollable

sexual desire, diagnosable as nymphomania (Alkaloidal Clinic, *Sexual Hygiene*).

It was not uncommon for physicians during the late 1800s and early 1900s to express their concerns about the dangers of women becoming overly-sexual. After physician James Marion Sims created one of the first modern specula in 1845 in order to better view a woman's cervix, the use of the speculum was critically debated among physicians in reproductive medicine:

> "In 1850, doctors belonging to the Royal Medicine and Chirurgical Society of London attended a meeting to debate arguments for and against the use of the speculum in gynecology, with some worrying that female patients would mistake examinations for a sexual experience. Sandelowski states that some doctors and members of US society thought that exposing a woman's body could corrupt women, or cause them to become obsessed with sex, and then become prostitutes…
>
> In 1853, Robert Brudenell Carter discussed what he claimed were the consequences of specula use in his book *On the Pathology and Treatment of Hysteria.* Carter claimed that in his experience as a physician, he had seen young, unmarried, middle-class women become morally and mentally equivalent to prostitutes from repeated use of the speculum and would continuously ask for examinations."
>
> Horwitz, Rainey. "Vaginal Speculum (after 1800)." *Embryo Project Encyclopedia.* Forthcoming Publication

As many women can attest, speculum exams are not commonly a sexual experience in the twenty-first century and were not likely during the 1800s. It is more likely that speculum exams of the 1800s were both physically and mentally uncomfortable, as many women report today (Vandenberg).

Physicians of the early 1900s also discussed the perceived medical dangers of masturbation, and any sexual acts other than heterosexual, penetrative intercourse. The physicians of The Alkaloidal Clinic asserted in *Sexual Hygiene* that acts like infidelity and masturbation led to moral and physical decomposition as well as hysteria in women. Similarly, in *Sexology*, Walling warned other physicians that patients engaging in masturbation will

experience weakness, absence of freshness and beauty, loss of color from complexion and lips, and loss of whiteness from teeth. Walling practiced that masturbation caused one to become "pale, puffy, flabby, spiritless, sad, have a dry cough, and have shortness of breath." Walling also claimed that masturbation can cause women to develop nymphomania, a medical condition involving increased libido and hypersexuality. He instead encouraged only marital intercourse requiring penetration inside the vagina, claiming that without contact of seminal fluid from the penis on the mouth of the womb, neither the woman or the man could experience sexual pleasure. Any alternative form of sexual contact going against nature was considered by Walling and his colleagues to be medically dangerous, causing illness in both men and women, including diseases of the brain, kidney, heart, lungs, muscles, blindness and erectile dysfunction (Walling, *Sexology*). Walling also stated in his medicall manual that if a woman is to engage in non-penetrative sex, she will almost certainly develop cancer of the womb, something that today, we know not to be false.

In *Sexual Hygiene* physician Joseph Ziesler made similar claims that withdrawing a man's penis during sexual intercourse to prevent childbearing was dangerous to both men and women. Both Walling, and the physician editors of The Alkaloidal Clinic published medical claims that condoms were not only unbearable but also physically injurious to both men and women because of the electrical hindrance caused by the rubber material, suggesting the idea was shared by many physicians at the time. Without any concrete evidence, physicians made authoritative claims about sex, science, and medicine and likely influenced the thinking of their peers in the medical field with those medical misconceptions. Physicians encouraged heterosexual marital intercourse and simultaneously discouraged sexual behaviors that they deemed morally inappropriate, like masturbation, sex during menstruation and lactation,

homosexuality, and infidelity, by employing medical arguments in support of their claims.

Walling, like many of the physicians and editors of the Alkaloidal Clinic was a professor at a medical school and a practicing, licensed obstetrician gynecologist. He developed and taught several medical techniques for using electricity in his gynecological practice, and was considered by many to be an authority in his field (Walling, *Sexology).* Some of the techniques may be considered dangerous and unnecessary by twenty-first century medical standards. Those practices illustrate just how far physicians like Walling took some medical misconceptions surrounding the female reproductive organs, and raises some questions about the outcomes of those procedures that he did not report.

"Some of The Uses of Electricity in Gynaecology," (1901) by William H. Walling

Horwitz, Rainey "'Some of The Uses of Electricity in Gynaecology,' (1901) by William H. Walling." *The Embryo Project Encyclopedia.* Forthcoming publication.

In 1901, physician William Henry Walling published the article, "Some of the Uses of Electricity in Gynecology," in the January issue of the *American Gynecological and Obstetrical Journal*. Walling was a practicing gynecologist who studied electro-therapeutics, or the use of electricity in medicine for the treatment of disease, which was an emerging topic during the late 1800s. Walling stated that proper administration of electrical current to a woman's vagina, uterus, bladder, or rectum could be therapeutic for gynecological diseases. He supplies scientific explanations for some of his claims, but not for all. The article provides readers of the twenty-first century with context and historical examples of electrotherapy in women's health, of what

physicians understood about female reproductive anatomy, and of the standard of care in gynecology during the turn of the twentieth century.

At the end of the 1800s, the increasing availability of electricity changed the way people lived and received medical care in the US. At that time, practical uses of electricity in appliances and machines became more popular, and many physicians began using electricity in their medical practices. Before, throughout the nineteenth century, physicians utilized hand cranked electrotherapy machines to treat numerous ailments, though it is unknown how effective they were. In the 1880s, New York City began installing electrical systems for homes and, by 1925, over half of the people in the US had electricity access in their homes.

Walling was born in Smithville, New York, in 1836. He served for the Union hospital service in the US Civil War during the 1860s and received a Congressional Medal of Honor for his service. Walling received his medical degree from Medico-Chirurgical College in Philadelphia, Pennsylvania, in 1889. He later worked as a physician and professor of gynecology at Eastern College in Philadelphia, Pennsylvania, as well as a professor of electrotherapeutics at his *alma mater*, Medico-Chirurgical College. While living in Philadelphia, Walling also served as the editor for the *Philadelphia Medical Times and Register*, a bi-weekly medical journal. According to his obituary in the *Journal of The Medical Society of New Jersey*, Walling was a prominent figure in medicine at the time and was a member of the American Medical Association, the Atlantic County Medical Society, and the Medical Society of New Jersey. Walling studied a variety of medical issues that he considered progressive, including sexual health and wellness, electrotherapy, obstetrics and gynecology, urology, and malignant diseases of the rectum. He also believed that over-excitation and stimulation of all kinds, including masturbation, could cause insanity, memory loss, and loss of intelligence.

Walling's article in the *American Gynecological and Obstetrical Journal* in 1901 discusses uses of electrical current for treating gynecological issues, a subject he studied and published literature on. Walling's article features detailed gynecological treatments, including electrical current and electrodes, or a conductor through which electrical current flows. He never mentions the shape or appearance of the electrodes, but mentions that when used internally, the physician must keep them in constant motion to prevent adhering to the reproductive tract. Walling opens with a brief introduction, and then specifically addresses the use of electricity in gynecology. He included multiple subsections, which he titled as *Amenorrhea*, or absence of menstrual period, *Dysmenorrhea*, or menstrual cramping and pain, *Ovarian Neuralgia, Delayed Menstruation, Erosions, Metritis and Endometritis, Pyosalpinx,* or fluid inside the fallopian tubes where the egg travels from the ovary to the uterus, *Subinvolution with Hemorrhage*, or failure for the uterus to return to its original size prior to pregnancy, and *Fibroid Tumors*.

In the introduction, Walling asserts that electricity has more practical uses in gynecology than in some other areas of medicine. That is because the tissue surfaces within the female reproductive tract have less resistance than human skin, according to Walling. He explains how using different metal wires could cause more or less intense effects. Walling warns that if too strong of a current is used or applied for too long, an eschar, or burn-like wound will form, which Walling states could prove to be troublesome. Walling states that for a physician to stop any bleeding, or cauterize, a woman's uterine canal, 25 mA of current must be used for every square millimeter of electrode surface. Cauterizing produces a burn that stops bleeding. However, Walling's distinction between a problematic treatment-caused wound and a safe cauterization is unclear.

Throughout the article, Walling refers to faradic and galvanic currents in referencing his approach to electrical treatment of gynecological concerns. A faradic current is an alternating, asymmetric current that stimulates muscles. A galvanic current is a direct current of steady flow that can be used to stimulate muscles. At no point does Walling justify why certain currents are used in certain circumstances, but he presents the information as medical fact. Additionally, Walling also never mention how the patient reacts to or perceives the treatments.

Walling begins the section on how electricity can be used to treat *Amenorrhea*, or the absence of a woman's menstrual period. Walling claims that sometimes physicians only need to apply a small electrical treatment to the woman's tissues without any electrical shock. In worse cases, Walling suggests that a shock method provides good results if the patient is slowly weaned onto the higher shock dosage with the goal of trying to re-establish menstrual flow. He discusses treatment schedules and frequency, stating that a woman may need to receive treatment multiple times a week and even multiple times throughout the day until her menstrual flow is reestablished. Additionally, Walling states that the possibility of pregnancy is excluded before beginning treatment.

Next, Walling details the usage of electricity to treat *Dysmenorrhea*, or painful menstrual cramping. He suggests techniques like using static spark, applying galvanic current to the lower part of the abdomen, as well as applying faradic current to the abdomen to prevent monthly pain. In cases of dysmenorrhea, Walling states that some form of intrauterine electrical treatment is necessary for treatment and would require healing. He recommends the use of electrodes inside the woman's vaginal canal to remedy cramping and claims that the opening of the uterus can be enlarged by negative charge and constricted by positive charge, but does not mention how that relates to treating cramping.

In the following section, titled *Ovarian Neuralgia*, Walling describes the usage of electrodes in treating nerve pain adjacent to the ovaries. In the twenty-first century, that diagnosis was discredited and is no longer commonly used. Instead, many women are diagnosed with ovarian cysts that can cause stabbing pain. Walling recommends placing a vaginal electrode up against the painful ovary and gradually increasing the electrical current until the woman's pain subsides. Walling also claims that for the treatment to be successful, it requires many additional treatments.

For treating *Delayed Menstruation*, Walling guarantees that electrical current can help jumpstart cycles in those young people who have not started menstruating. Walling also assures readers that electrical current will not create sexual excitation and provides evidence from an all-male study from 1890 to support that claim. He then provides specific examples of conditions for which physicians can use a faradic current to treat, including abnormally heavy or prolonged menstrual periods, and fibroids, which are non-cancerous tumors.

Walling then details the usage of electrical current to treat *Metritis and Endometritis*, or inflammation of the uterine lining. He attests that other physicians specializing in electrotherapeutics and gynecology would testify to the success of using electrical current to treat inflammation of the uterus, and implies that those physicians find the procedures to be safe for women. According to Walling, using a positive electrode in a woman's uterus acts as an anti-congestive and hemostatic, meaning it can help stop bleeding. He claims that it prevents excessive vascularization, or the overgrowth of blood vessels, in the female reproductive tract. Negative electrodes, according to Walling, can be used to improve circulation. When treating the uterine endometrium, or the lining of a woman's uterus, with electrical current, Walling recommends using an electrical current intensity from 10 to 100 mA as a range, depending on

the needs of the patient, and also recommends sitting with the internal electrodes in place for five to ten minutes. Walling warns that, in some cases, physicians have found hyperesthesia in women, or increased sensitivity to pain, when electrical current is applied to certain regions of a woman's uterine tract, especially the cervix. To alleviate sensitivity, Walling recommends covering the electrode with cotton soaked in cocaine before applying the electrical current.

Walling next provides instructions for physicians to help them determine if their female patients have *Pyosalpinx*, or pus in the fallopian tubes, using faradic current. If a woman feels lingering pain after being treated for endometritis, or inflammation of the uterine walls, with a strong galvanic current, physicians must apply a secondary positive faradic current in the vagina at the highest intensity possible and let it run until the woman's pain subsides. If her pain subsides, Walling states, there is no pus in the fallopian tubes. If pain is still present, he states that pus is undoubtedly present in the woman's fallopian tubes.

Walling continues by detailing the usage of electricity to treat *Subinvolution with Hemorrhage*. Subinvolution is when the uterus fails to return to its original state prior to pregnancy, and hemorrhage is profuse bleeding typically originating from a blood vessel. Walling claims that using electrical current can create strong uterine contractions to remedy the over-relaxation of muscle fibers in the uterus. He later mentions that physicians can stop a woman from hemorrhaging by applying a galvanic electrical current directly into her uterus via her cervix to stop the source of the bleeding.

Lastly, Walling discusses electro-therapeutics for treating uterine *Fibroid Tumors*. He claims that fibroids which bleed are easier to treat than those fibroids which do not bleed. Physicians can apply electrical current to a woman's fibroid to stop the bleeding and reduce its size in the same way physicians apply electrical current to a woman's uterus to stop a

hemorrhage. However, physicians are unable to remove fibroids which do not bleed with electrical current, because those fibroids tend to be hard and bulky.

Though the study of electrotherapeutics was popular in many fields of medicine during the 1800s and early 1900s, the fad of electrotherapeutics dissipated and Walling's practices were never adopted into lasting, standard gynecological practice. In the twenty-first century, gynecological practices and standard of care are very different than those at the time of Walling's procedures, and consider factors like patient comfort and safety. Informed consent and techniques used by Walling might now be considered questionable.

Sources:

1. Licht, Sidney Herman., "History of Electrotherapy", in Therapeutic Electricity and Ultraviolet Radiation, 2nd ed., ed. Sidney Licht, New Haven: E. Licht, 1967, Pp. 1-70.
2. The Journal of the Medical Society of New Jersey. "Obituaries: Walling." March 1910.
3. The National Park Service. "Thomas Edison: The Electric Light System" 26 February 2015. https://www.nps.gov/edis/learn/kidsyouth/the-electric-light-system-phonograph-motion-pictures.htm
4. Walling, William H. *Sexology*: *Family Medical Edition*. Puritan Publishing Company: Philadelphia 1904.
5. Walling, William H. "Some of The Uses of Electricity in Gynaecology," *The American Gynaecological and Obstetrical Journal.* New York, 1901. https://books.google.com/books?id=aJ4gAQAAMAAJ&lpg=RA1-PA122&ots=abMYEHjz68&dq=%22Eastern%20College%22%20of%20Gynecology%20philadelphia&pg=RA1-PA122#v=onepage&q&f=true

V. Factor 3: Sexual Morality in Medical Practice

Discussing sex in the medical field during the 1800s was considered progressive (The Alkaloidal Clinic, *Sexual Hygiene*), especially considering harsh censorship laws enacted at the

time that prevented the discussion of topics deemed obscene, like some women's reproductive concerns. In 1873, The Comstock Law, introduced by Anthony Comstock limited women's reproductive rights by banning the circulation or printing of content deemed obscene, including information mentioning birth control, abortion, and sexual education materials (Seward). The law institutionalized a moral agenda that people shouldn't have access to information about women's reproductive choices until it was no longer enforced in 1965 after being found unconstitutional (Nunez-Eddy and Malladi). Physicians practicing during the time when the Comstock Law and similar social and legal rationale was may naturally have practiced medicine under similar moral standards, influencing the care their patients received and the access to information they were given about their sexual health.

In the early 1900s, some physicians engaged in some moral debate about what was permissible and prohibited in regards to sexual norms, writing full books on the subject matter. *Sexual Hygiene* and *Sexology* serve as some of American medicine's earliest attempts to talk about sexuality and topics relating to sex, and both publications are heavily influenced by moral reasoning of the time period that limited sexual freedom. While Walling and the physician members of the Alkaloidal Clinic may have been open to discussing topics they found uncomfortable, like sex, others expressed concern that medicine involving reproductive organs needed to maintain morality and not lead patients to look or behave in a way that was sexually immoral or abnormal according to the physicians.

As voiced by the physician authors of *Sexology* and *Sexual Hygiene*, discussing sex and reproductive health not only made some patients uncomfortable, but also their physicians. Throughout history, physicians dealing with sexual health matters have walked a line on topics which what some consider medicine, others consider obscene. When dealing with matters of

sexual health, it could be that legitimizing discussion of sex in medicine was a slow process because of moral discomfort in the medical field and existing misconceptions about the female body.

Up until the 1900s, many physicians believed that a woman could only experience sexual arousal from vaginal penetration, and in the twenty-first century physicians began to understand the sexual function of the clitoris and female orgasms. Interestingly, for thousands of years, physicians throughout the world used pelvic massage as a treatment for female hysteria. Despite the sexual connotation that clitoral stimulation carries today, in the late 1800s, pelvic massage was not considered a sexual experience but rather a medical treatment for a disease only occurring in women.

Medical Vibrators for Treatment of Female Hysteria

Horwitz, Rainey, "Medical Vibrators for Treatment of Female Hysteria". *Embryo Project Encyclopedia.* Forthcoming Publication

During the late 1800s through the early 1900s, physicians administered pelvic massages involving clitoral stimulation by early electronic vibrators as treatments for what was called female hysteria. Until the early 1900s, physicians used female hysteria as a diagnosis for women who reported a wide range of complaints and symptoms unexplainable by any other diagnosis at the time. According to historian Rachel Maines, physicians provided pelvic massages for thousands of years to female patients without it being considered erotic or sexually stimulating. After the Western Industrial Revolution, physicians began using electric machines in medicine, including the medical vibrator, which researchers theorize was used to more efficiently bring women to a hysterical paroxysm, the former medical term for a female orgasm. Until the 1920s,

physicians used vibrating massagers as medical devices for treating hysteria at a time when doctors diagnosed women with hysteria as a sweeping diagnosis.

Physicians throughout the world used the term hysteria as a medical diagnosis for women who exhibited a variety of symptoms and behaviors. Researchers discovered the first mention of diseases specific to women in Ancient Egyptian medical texts from around 2000 BC Greek philosopher Hippocrates was one of the first to mention hysteria in gynecologic medical accounts. Around the same time, Greek philosopher Plato wrote that hysteria was caused by women not having children, stating that a childless womb would become distressed and move throughout the body, causing health problems. According to historian Lana Thompson, many people in early societies believed that a woman's womb wandered throughout her body, causing a variety of medical problems by making contact with other organs like the lungs, liver, and brain. Some physicians based their theories of female hysteria on the wandering womb theory, and prescribed medical treatments including marriage, heterosexual sex, pregnancy, applying pleasant-smelling oils to female genitals, and external vaginal stimulation with the idea that the treatments would anchor the uterus back into its proper location in the pelvis.

Physicians continued to diagnose women with female hysteria throughout the first two millennia AD and continued to practice external genital stimulation as a treatment for hysteria. According to Havelock Ellis, physician and author of *Psychology of Sex*, a study estimated that in 1913, 75 percent of women suffered from female hysteria. Physicians diagnosed hysteria based on a long list of common symptoms including headache, forgetfulness, irritability, insomnia, writing cramps, hot flashes, excessive vaginal bleeding, heaviness in the limbs, usage of coarse language, severe cramping, difficulty breathing, desire for clitoral stimulation, hyper-promiscuity, mood swings, nausea, anxiety, drowsiness, loss of appetite, aging, back pain,

swollen feet, cancer, organ failure, endometriosis, heart disease, epileptic fits, and what are now known as symptoms of depression, schizophrenia and other psychological disorders. According to Maines, for centuries, doctors believed that women were biologically weak and flawed for exhibiting behavior and bodily functions that twenty-first century scholars consider normal. She claims doctors thought those symptoms of women's disease warranted medical intervention and correction.

Since society and physicians of the time did not correlate external genital stimulation with sexual practice, during the late 1800s, physicians believed that clitoral stimulation through medical pelvic massage could effectively reduce symptoms of hysteria. According to Maines, during the 1800s, the medical community believed that only vaginal penetration was sexually stimulating for women, and as a result, physicians were averse to the use of tampons and specula, for concern that use would cause a woman to instantly become aroused. A speculum is a medical device used routinely by gynecologists in the twenty-first century that expands the walls of a woman's vagina to view her cervix. During the 1800s, society believed female masturbation, or the stimulation of one's own genitals for sexual arousal, required vaginal penetration, not clitoral stimulation. Many physicians, including nineteenth century gynecologist William H. Walling, thought masturbation could cause negative health consequences for women, including uterine cancer. If the female patient became flushed and relieved during the pelvic massage treatment for hysteria, physicians explained that she was experiencing a hysterical paroxysm, which is now known as an orgasm. That signified that the treatment was successful and the physician would believe the patient to be relieved of her negative symptoms attributed to hysteria.

Before physicians used medical vibrators for pelvic massage, hydrotherapy, or water therapy, was one of the first technological advancements in treating hysteria and a precursor to medical vibrating massagers. Hydrotherapy treatment involved the pelvic douche, which was an apparatus that originated in France during the mid 1800s. Hydrotherapy spas were located in European-style bathhouses and spas, and treatment involved aiming a powerful jet of water at a woman's inner thighs and genitals. Health specialists claimed the device could cause hysterical paroxysm in under four minutes. According to Maines, women frequently left the douche treatment feeling extreme relief from hysteria and felt as if they had been drinking champagne. Other available treatments during the late 1800s included water jets dispersed by hand cranks, and one used a miniature water wheel that could be attached to a sink.

As physicians began diagnosing hysteria during the 1800s and early 1900s, more women needed treatment, including many women whose husbands sent them to the doctor, according to Maines. According to historian Greer Theus of Washington and Lee University in Lexington, Virginia, during the Victorian period of the 1800s, as literacy rates among women increased, doctors attributed higher rates of hysteria to the alleged dangerous behaviors of intellectual women, including attending school and working outside of the home. The 1899 edition of the *Merck Manual*, a medical reference book, listed pelvic and genital massage as a treatment for hysteria. Additionally, when commenting on treatments for hysterical women, twentieth century physician Samuel Howard Monell described gynecological pelvic massage as having positive results in treating hysteria.

During the nineteenth century, societies throughout the US and Europe experienced what historians refer to as the Industrial Revolution, during which efficient manufacturing processes combined with the recent discoveries of ways to harness electricity resulted in the production of

many new machines and the emergence of electronic devices. The vibrating massager was one of the earliest invented electronic devices. The sewing machine was the first electronic home device, and according to Maines, the vibrating massager was the fifth, and preceded the vacuum cleaner by nine years. Around the same time as the Industrial Revolution, physicians began looking for more efficient ways to treat hysteria. In her book, *The Technology of Orgasm,* Maines presents her hypothesis that some physicians used and developed vibrating machines to treat women with hysteria to save time and to avoid the laborious task of manual massage on the increasing number of female patients. In her hypothesis, Maines presents evidence that physicians legitimized and justified the clinical production of hysterical paroxysm as a treatment for a disease, and hysterical women drove the market for vibrating massagers during the turn of the nineteenth century.

In 1869, American physician George Taylor patented one of the first medical vibrators called The Manipulator. Patients sat on a padded table with a hole cut out to reveal their lower abdomen, through which a vibrating sphere massaged the woman's genitals. Because the apparatus was large, heavy, expensive, and coal-powered, large spas and physicians with large practices primarily purchased and maintained the devices for their guests and patients. While most historians agree that physicians of the time believed vibrators most reliably treated hysteria, they also used vibrating devices to relieve constipation, arthritis, and muscle fatigue.

In the early 1880s, physician Mortimer Granville invented the first portable, battery-powered vibrator that weighed over forty pounds. However, Granville wrote in 1883 that he did not intend for his device to treat hysteria, and rather intended its use only for male muscle fatigue. According to Maines, Granville believed women might mimic hysterical symptoms in order to gain treatment, despite not needing it for medical reasons. In other words, Granville did

not want women to have orgasms after using his vibrator device, according to Maines. According to reporter Natalie Angier, vibrating massage devices continued to appear in magazines during the early 1900s, some powered by electricity, foot pedal, water turbine, gas engine, or air pressure.

As batteries became smaller and the use of home electronics began, advertisements for portable vibrators appeared in ladies' magazines, newspapers, and catalogues targeted at female buyers, including *Needlecraft*, *Woman's Home Companion*, *Modern Priscilla,* and *Sears-Roebuck*. Companies also continued to market vibrating devices for medical uses other than hysteria. For men, the advertisements claimed the vibrating devices could treat muscle fatigue and arthritis. For women, the advertisements claimed the vibrating devices could function as a household appliance.

In the 1920s, stag films, which were pornographic films of the early twentieth century, featured medical vibrators in a sexual context, and according to Maines, made vibrators socially unacceptable. After their use in stag films, physicians began considering vibrators as sex toys and perceived their use in women as something sexual rather than therapeutic. After 1952, the American Psychiatric Association's revisions of the *Diagnostic and Statistical Manual of Mental Disorders* removed hysteria as a medically-recognized diagnosis for women, though physicians continued to use similar diagnoses like histrionic personality disorder for both women and men into the twenty-first century. As of 2019, medical professionals no longer use the term hysterical paroxysm and they now refer to the relief of tension achieved through external genital manipulation, or masturbation, as a female orgasm.

Sources:

1. Angier, Natalie. “ESSAY; In the History of Gynecology, a Surprising Chapter.” The *New York Times.* 23 February 1999. https://www.nytimes.com/1999/02/23/science/essay-in-the-history-of-gynecology-a-surprising-chapter.html
2. Cupaiuolo, Christine. “‘Dr. John Butler’s Electro-Massage Machine’: A History of Manufacturing Female Pleasure.” *Our Bodies Ourselves.* 23 July 2007, https://www.ourbodiesourselves.org/2007/07/dr-john-butlers-electro-massage-machine-a-his/
3. Havelock, Ellis. *Studies in the Psychology of Sex Volume III: Analysis of the sexual impulse, love and pain, the sexual impulse in women.* F.A. Davis Company: Philadelphia 1913. https://archive.org/details/cu31924013991678
4. Lane, R.J. “A month at Malvern under the water cure: with the sequel, etc., etc..” John Mitchell, Royal Library: London 1885. http://discover.odai.yale.edu/ydc/Record/1673687
5. Maines, Rachel. *The Technology of Orgasm.* Johns Hopkins University Press: Maryland 1998.https://archive.nytimes.com/www.nytimes.com/books/first/m/maines-technology.html
6. Tasca C, Rapetti M, Carta MG, Fadda B. Women And Hysteria In The History Of Mental Health. *Clinical Practice and Epidemiology in Mental Health : CP & EMH*. 2012;8:110-119..https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3480686/
7. Thompson, Lana. “The Wandering Womb: A Cultural History of Outrageous Beliefs About Women.” Prometheus Books: New York 1998. https://books.google.com/books?hl=en&lr=&id=66H_bRK5JJQC&oi=fnd&pg=PA1&dq=wandering+womb&ots=z-Ru39KzLJ&sig=PA_LISYnMNE5VWuFJtKQokd8iXw#v=onepage&q=wandering%20womb&f=false
8. Washington and Lee University Online. “Background on Hysteria.” https://crimescandalspectacle.academic.wlu.edu/welcome/nineteen-century-perceptions-of-hysteria/background-on-hysteria/
9. Walling, William H. *Sexology*: *Family Medical Edition*. Puritan Publishing Company: Philadelphia 1904

The use of pelvic massage and vibration for treatment of hysteria and how it fell out of fashion shows how, over time, the lines may have been blurred between what is considered sexually erotic and what is considered medical when dealing with issues of female sexuality. As society progresses over time, the consensus changes on what is permissible and what is inappropriate in terms of contacting and viewing the female sexual organs, which may have posed as a particular challenge for normalizing medical discussions surrounding sex among physicians and between physicians and their patients.

Strangely, while the use of a vibrator on female genitals possibly may not have been viewed as overtly sexual, usage of devices like tampons and specula were ridden with controversy for their perceived moral dangers by some. Devices that allowed people to manipulate, contact, and better view a woman's genitalia brought controversy within medical field, with some physicians felt that interacting with a woman's reproductive organs that closely and intimately in a medical setting was immoral (Vostral). In ways similar to the reactions to use of the speculum, the introduction of the menstrual tampon in society also came with moral controversy:

> "During the 1930s, according to Fetters, there was common social discomfort with the idea of women touching themselves at all near their vagina or labia, the skin forming the inner and outer folds of the vulva, or the female external genitals. Many, including physicians, believed that tampon use involving a woman touching their reproductive organs would cause the woman to sexually pleasure themselves or break a woman's hymen. The hymen is a membrane of tissue located at the opening of the vagina that many associated with a women's virginity. In America and many other parts of the world, a woman's virginity was considered sacred and kept the woman pure before marriage. According to Sherra Vostral, author of *Under Wraps: A History Of Menstrual Hygiene Technology*, the use of tampons was considered by some to render a woman impure and was discouraged by some groups. According to Fetters, [Earl] Haas sought to design a tampon that could be inserted into the vagina without the woman having to touch her sex organs directly. He modeled the applicator after telescope tubes, with one tube fitting inside the other.
>
> During the early history of the tampon, according to women's studies scholar Carla Rice, some people had concerns about the use of the device, including physicians. During the early-mid twentieth century, some, including physicians objected to the use of menstrual tampons for religious and ethical reasons, claiming they would rupture a young woman's hymen that marked her virginity or cause young girls to experience erotic feelings, which was discouraged (Rice). According to Fetters, physicians considered to be forward-thinking embraced tampons and recommended them to their patients, and others condemned them."
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> Horwitz, Rainey. "Menstrual Tampons" *Embryo Project Encyclopedia.* Forthcoming Publication.

During the late 1800s and early 1900s, physicians also expressed moral discomfort and offense to the idea of both male and female masturbation, and other sexual acts straying from heterosexual vaginal penetrative sex that physicians. Physicians like Walling and William T. Belfield of the Alkaloidal Clinic stated their clear beliefs that being sexually excessive, experimental, or abnormal would cause physical and mental deterioration (*Sexology)*. Patients were diagnosed with nymphomania for behaving overly-sexually and in books like *Sexology* and *Sexual Hygiene,* physicians communicated moral norms about sex and how it should be accomplished. The editors of the Alkaloidal Clinic stated that the aim of their book was not to explain or "invade the sacred ritual of married sex" but to treat sexual dysfunction and disease with medical diagnoses that require physician intervention (*Sexual Hygiene*). According to those physicians, without medical intervention, untreated sexual irregularities can lead to family disagreements, self abuse by which they seem to have meant masturbation, adultery, divorce, suicide and murder (Alkaloidal Clinic). That rationale, though explained by the physicians in pseudo-science language, was largely morally informed.

It may be that some physicians played a role in policing the sexual behaviors of their patients and influenced the sexual norms that spread throughout society, including a medical fear of over-sexualization shared by many physicians mentioned in this study. Despite their assertive claims, those physicians may not have fully known what they were doing in providing medical advice on areas of the body that not much was known. Physician's moral attitudes towards masturbation, homosexuality and sexual experimentation may have impacted the medical care that their patients recieved and the information they were given about their bodies. Physicians of the twenty-first century generally agree that engaging in frequent sex, homosexuality,

masturbation, and experimenting sexually can be safe if proper safety measures are taken like consent, protection, contraception, and communication between partners.

In Walling's book *Sexolgy,* he explains his theories which he claims are widely agreed upon in the medical field regarding the morality of terminating pregnancies. Walling asserts that children have a right to be born, and that conception is a God-given privilege that should never be questioned. He also provides medically backed claims in opposition to abortions and criticized advocates for promoting family planning and population management through birth control (Walling, *Sexology*). He employs strongly religious arguments for why abortion is equivalent to murder and asserts that women have no decision to make on whether or not they want to be a mother because the primary duty of women is to become mothers, according to Walling. In physician Joseph Ziezer's presentation for the Alkaloidal Clinic in *Sexual Hygiene*, he asserted with medical authority that if a woman is not ready to have children, then she is not ready to be married (Alkaloidal Clinic). Later in *Sexual Hygiene,* the editors discuss women who attempt to prevent completion of intercourse to avoid becoming pregnant. The editors comment that it is morally wrong for women to seek sexual pleasure without remaining accountable or "paying for it", as they say, or not assuming their procreative responsibility (Alkaloidal Clinic, 143). Physicians were influenced by moral traditions and used biological arguments to justify heterosexual monogomy, sexual modesty, and the natural inferiority of women and limit their purpose solely to procreation. This mentality was likely shared among other physicians and incorporated into their medical practice during the late 1800s and early 1900s, possibly contributing to the reproductive health care women received from physicians and how women understood their bodies and sexual function.

VI. Factor 4: Medical Tradition and a Physician's Role

Upon entering the medical field, medical students are required to take a Hippocratic Oath. In 1847 the American Medical Association adopted their Code of Medical Ethics which includes the Hippocratic Oath physicians have taken for centuries (Riddick). Since then, physicians have sworn to not cause harm to patients and use their expertise and authority to only work to heal. Despite this optimistic rhetoric, not all physicians have practiced medicine in the same way, and for some, traditional morals and attitudes of physicians before them influenced their medical practice. Women throughout history have claimed to have been affected negatively and felt patronized by their male physicians and were treated condescendingly when inquiring about their own health (Makers).

It is also a possibility that the changing role of a physician throughout history and the relationship that doctors maintained with their patients were also factors affecting the medical care women received. Up until the 1800s, many physicians were not licensed and formal medical training in medical schools did not become standardized until the late 1800s and into the twentieth century, specifically after the findings of the Flexner Report in 1910 showed that there were too many illegitimate doctors and schools in the US. As a result of the findings of the Flexner report, many medical schools were closed, including those teaching electrotherapy. Additionally, requirements for physicians and their training became much stricter, school standards became homogenized, and medical students became required to complete over four more years of instruction before becoming licensed physicians (Barzanzky). Before then, people, however mostly men, could practice as a physician without having to prove their expertise or qualifications, resulting in some "physicians" actually practicing quackery, or false

medicine. Pseudo-physicians also developed patent medicines for sale, which had no testing, medical labeling or regulations. Without regulations and ethics codes, some unlicensed physicians were able to experiment on female patients without their consent. During the 1840s, women's medicine specialist James Marion Sims invented the Sims speculum, a metal device similar to a bent spoon that could be used to better view a woman's cervix in medical practice. Sim's also developed obstetrical and gynecological surgical procedures, including a treatment for vaginal fistulas occurring after a long child birth, that he practiced on and experimented with purchased female black slaves, using little to no anesthesia, and without their formal consent (Horwita, "Speculum"). In the last one hundred years or so, many more physicians have specialized in obstetrics and gynecology and inquired about topics like sex and how the body operates sexually, which was not as common prior to the 1900s.

Throughout US history, physicians have generally been trusted by members of society and often people take their word as the truth without significant question. Physicians have a responsibility to better the health of their patients, however in some instances of women's medicine throughout history, some physicians practiced in ways that did not respect the autonomy of female patients. In *She's Beautiful When She's Angry*, a documentary highlighting the second wave feminist movement and women's reproductive rights activists of the 1960s and 1970s, women alive during the movements claimed that throughout their lives growing up during the mid 1900s, and throughout their mother's lives, they had heard countless stores of women and feeling patronized and belittled by their physicians talking down to them and not taking women's health concerns seriously. Those women voiced their understanding that this was common among many women prior to US women's reproductive rights movements in the 1970s. Some physicians would not communicate medical diagnoses, prognoses, and other personal

information to female patients, and would rather inform their husbands or male caretakers who would then make medical decisions on behalf of the woman.

It is apparent that many physicians were uncomfortable discussing matters of sexual health among each other and practicing sexual medicine with their patients, possibly for moral reasons. The editors of the Alkaloidal Clinic stated in their medical manual *Sexual Hygiene* that they did not enjoy discussing sex, however they believed it to be a physician's duty to deal with uncomfortable subjects (like genitals) and discuss them in the most sensible and scientific ways. Throughout the 1800s, some physicians continued to perform manual pelvic exams on female patients under their skirt without actually using their eyes to view their genitals, posing as a possible setback for providing accurate diagnoses and practicing the best medicine. In his unfinished autobiography, Sims who made significant advancements in the field of women's reproductive medicine, like inventing the speculum and developing obstetric surgical procedures, also expressed that if there was anything he hated, it was investigating the organs of the female pelvis (Andrei). In *Sexual Hygiene* physician members of the Alkaloidal Clinic also voiced their dislike for studying female reproductive anatomy with physicians stating they were not excited to discuss women's sexual organs and some stating they felt unqualified to talk about women's reproductive health as a specialist and thought someone else might be better fit to serve as experts. After many years of physicians literally refusing to use their eyes to evaluate the female genitals, it is plausible that physicians maintained misunderstanding and confusion about the female sexual organs and sex in general that was shared with their patients, causing many women to misunderstand their bodies.

VII. Factor 5: Non-medical Reproductive Health Solutions and Practitioners

I discuss this topic in detail in my Honors Thesis with the Barrett Honors College at ASU in 2018. Below is an abstract published by the American Association for the Advancement of Science for their Annual Meeting after I presented my poster on the subject at the 2018 meeting in Austin Texas.

Non-Medical Origin's of Women's Reproductive Health Solutions in the US.

Horwitz, Rainey, "Non-Medical Origins of Women's Reproductive Health Solutions in the US." *AAAS* Annual Meeting Poster Abstract. February, 2018.

Prior to the legalization and regulation of abortion and contraception in the late twentieth century, women could not readily access safe birth control, abortion, and other reproductive health options at clinics and doctor's offices. Thus, women sought out alternative means to control their reproduction that were often illegal, unreliable, and unsafe, often because they were provided by untrained reproductive health care providers. The untrained providers who performed unregulated reproductive health services during the 1800s through the mid 1900s were often referred to as "female physicians," despite not having any formal medical background. Those providers filled a demand to serve women who were not able to tend to unwanted pregnancies and other reproductive issues on their own, but their role in the history of women's health has not been well understood.

I have investigated the following questions: (1) How have women sought alternative non-medical approaches to managing reproduction, and (2) what historical patterns and situations can we see showing that non-medically trained people were active in the reproductive lives of women throughout the 19th and 20th centuries in the US? To study this, I have engaged in historical review methods to trace the evolution of reproductive health care providers and educators. Specifically, I have examined historically active people, organizations, and events that

involved women seeking alternative care and how the state of women's health care affected women's medical outcome.

Through my investigation, I found a large number and variety of non-medical providers and approaches to women's reproductive health solutions due to an unmet need for reproductive healthcare and restrictive laws. Women obtained concocted birth control pills, illegal abortions, home-brewed menopause relief treatments, and learned how to give self cervical examinations from non-medical providers. In response to the rigidity of the male dominated medical field, non-medical forces intervened and women's healthcare evolved beyond the traditional male physician's office into supportive healthcare groups like Planned Parenthood. My findings are relevant in the ongoing political debates surrounding issues like contraception and abortion access. By demonstrating the struggle for sound standard of care for non-medical reproductive health care providers during the nineteenth and early twentieth century, this project emphasizes what the standards of reproductive health care for abortion and contraception might be like if the organizations that made them so readily available, like Planned Parenthood, were defunded or criminalized in our modern setting.

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The non-medically trained reproductive health care providers of the 1800s and 1900s filled a void caused by the lack of formal reproductive health specializing physicians and their refusal to treat certain reproductive health concerns like family planning and abortions. Women's health specialists like OB/GYNs were very uncommon during the nineteenth century and US women frequently received reproductive health care from untrained, alternative medicine providers that had no previous background or training in healthcare (Reagan). While many

illegal and non-formally trained reproductive health service providers were often more concerned with making a profit and not the woman's safety, some sought to provide more reliable reproductive healthcare, women's health education, and protecting women's safety. Several examples of those providers are highlighted below:

Madame Restell opened several illegal abortion clinics in New York City during the later 1800s and provided women with home-made contraceptive pills and powders:

> "Self-proclaimed female physician Ann Trow was a women's reproductive health specialist as well as an abortion provider in New York City, New York during the mid 1800s. Although she had no formal medical training or background, Trow provided women with healthcare and abortions under the alias Madame Restell. Restell gained attention across the United States for her career as a professional abortionist during a time when abortions were highly regulated and punishable with imprisonment. Restell was tried numerous times for carrying out abortions. She never confessed to any crimes, but she was convicted on several occasions. Her services as a business woman, medicine producer, abortion provider, boarding house maintainer, and adoption facilitator provided women with solutions to unwanted pregnancies throughout her forty years of healthcare service and made her a subject of widespread controversy in the United States."
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> Horwitz, Rainey, "Ann Trow (Madame Restell) (1812–1878)". *Embryo Project Encyclopedia* (2017-08-23). ISSN: 1940-5030 http://embryo.asu.edu/handle/10776/12979.

Lydia Pinkham was also a patent medicine concocter during the 1870-80s. Pinkham provides an example of a regular mother and housewife that was able to achieve financial success and fame by creating an herbal "vegetable compound" that many claimed was able to effectively lessen the symptoms of menopause and menstrual discomfort, some even claiming it helped them get pregnant:

> "Lydia Estes Pinkham invented and sold Lydia Pinkham's Vegetable Compound, a medicinal tonic used to treat menstrual discomfort and promote female reproductive health in general, in the US during the nineteenth century. Pinkham also founded Mrs. Lydia E. Pinkham Medicine Company, a business that sold natural remedies for women's health issues. Throughout her life, Pinkham acted as an authority on female wellness, writing medical pamphlets about female anatomy and reproductive processes. In those pamphlets, Pinkham addressed female medical issues that physicians did not frequently

> discuss with their patients. Pinkham's advertising techniques and her products helped women learn about their reproductive anatomy and processes and helped ease menstruation."
>
> Horwitz, Rainey, "Lydia Estes Pinkham (1819–1883)". *Embryo Project Encyclopedia* (2017-05-20). ISSN: 1940-5030 http://embryo.asu.edu/handle/10776/11505.

Pinkham serves as an example of another person who was not medically trained that was active in the lives of many women's reproductive lives.

In the early 1900s, Margaret Sanger also served as a reproductive health advocate and provider. Sanger first published *Woman Rebel* Magazine in 1914, a controversial women's periodical discussing love and marriage, birth control, sexual education, and other topics. The magazine violated the federal Comstock Act, which prevented the publication and circulation of obscenities. Sanger continued providing reproductive health care and opened the first birth control clinic in the US in 1916 in Brooklyn, New York (Horwitz, "The First American Birth Control Clinic"). Sanger and her staff provided verbal information surrounding birth control options to female visitors in an effort to not violate the Comstock obscenity laws prohibiting written obscenities. Despite her efforts, the clinic was only open for ten days and was still judged in violation of the Comstock Act, however the attention the clinic received from the media raised awareness of women's reproductive health care disparities and increased birth control advocacy.

In 1931, female business woman Gertrude Tendrich purchased a patent for a disposable menstrual tampon and founded the first American tampon brand, Tampax. Similarly, actress Leona Chalmers invented and was the first to patent the menstrual cup out of vulcanized rubber to help women better manage their menstruation. Despite their lack of medical background, the inventions popularized and invented by Tendrich and Chalmers largely influenced women's reproductive lives for generations to come.

In 1969, students at the University of Chicago and other female community members formed the Jane Collective in response to the dangerous illegal abortion standards in the Chicago area prior to the legalization of abortion in 1973:

> "The Jane Collective was an underground organization that provided illegal abortion services in Chicago, Illinois, from 1969 until abortions became legal in 1973. Formally called the Abortion Counseling Service of Women's Liberation, the Jane Collective was a member organization and working group within Chicago Women's Liberation Union that challenged the Illinois state legislature by providing abortions before they were legal in the US. The organization, commonly referred to as Jane, was founded by women's liberation activists in Chicago in 1969 to reduce the number of unsafe and expensive abortions being performed by unqualified providers. It is estimated that from 1969 to 1973 the Jane Collective provided nearly twelve thousand abortions. The Jane Collective was a healthcare initiative and a political education project that provided abortion and reproductive healthcare solutions to thousands of women and brought attention to the many unsafe illegal abortions done in Chicago."

Members of the abortion counseling service learned abortion techniques from volunteer trained physicians, provided all abortions and counseling, and provided women with a safe place to obtain an abortion if she chose. The group advertised a phone number in local newspapers and posters, instructing desperate women dealing with an unwanted pregnancy ask for "Jane" when they called.

Around the same time period, Lorraine Rothman and her friend and colleague Carol Downer were active women's health activists in Los Angeles and throughout California during the early 1970's just prior to the legalization of abortion with the Supreme Court case *Roe v. Wade.* Rothman and Downer traveled the US giving educational seminars to women on how to perform self-examinations of their reproductive anatomy so women would not need to rely on the intervention of a medical doctor, who were predominantly male and often did not provide sufficient information on women's reproductive health matters for all reproductive issues (Makers). Downer notoriously performed a self-examination in 1971 at a women's liberation

meeting in California, demonstrating to attendees how to view one's own cervix and check for medical abnormalities (Horwitz, "Downer"). Downer claimed that the demonstration helped alleviate feelings of disgust and fear that the women had felt previously about their bodies (KPCC).

Rothman also invented the Del-Em Kit which was a menstrual extraction kit that doubled as a home abortion kit. The device was made out of regular household and kitchen items and was marketed as a menstrual extraction kit, since abortion was still illegal, and allowed women to perform somewhat safer abortions compared to the more dangerous and potentially deadly back-alley options that were the some of only other options when abortion was illegal in the US. Together, Rothman and Downer helped start the Federation of Feminist Women's Health Centers and co-founded The Feminist Women's Health Centers, which provided some of the first legal abortions in the US throughout California following the legalization of abortion in 1973. Rothman and Downer both serve as another example of people who were not doctors that made a difference in many women's reproductive lives.

Over the course of almost 200 years, women's sexual health concerns were addressed heavily by non-medically trained people. Whether that be because medical workers like physicians deemed women's reproductive health concerns pesky annoyances or inconvenient burdens, because of moral ideas, or because physicians did not understand female reproductive anatomy, medicine and US legislative bodies put women's reproductive health care and women's bodily autonomy in the back seat. While physicians treated women for female diseases like hysteria and nymphomania, medical professionals did not give the same attention to some of the natural processes occurring in all women, like menstruation, menopause, or the condition of having an unwanted pregnancy, resulting in the emergence of non-medical reproductive health

providers and resources.

VIII. Modern Relevance and Conclusion

Women's reproductive medicine in the US suffered as a consequence of physician and general lack of understanding of the female body and lack of priority or urgency to explore it. Shortcomings of reproductive medicine throughout history included physicians using their authority to prescribe (potentially unknowingly) harmful and unnecessary treatments to women. Factors other than medical knowledge and experience affected the way in which physicians practiced medicine and the reproductive healthcare that women received. Because physicians were mostly male, many based their practice on what was known about the male body and seriously misunderstood the female body. There may be some signs suggesting that those factors described may still be influencing reproductive medicine and discussions about sex to this day.

Today, many are still uncomfortable discussing female reproductive anatomy, especially when discussing sex and reproductive health. Despite all of women in the history of the world going through female reproductive development, groups throughout the US are still uncomfortable talking about menstrual periods, menopause, masturbation, pregnancy, breastfeeding, puberty and arousal. This lingering discomfort may be a product of some of the factors highlighted in this study that shaped how women understood their bodies and received reproductive medical care.

This study has discussed people and practices primarily existing in the 1800s and early 1900s, however many people continue to be uncomfortable discussing issues sex of sexual health. Public discussions about sex and sexual health continue to grow in the US, however in

states like Arizona Alabama, South Carolina, Oklahoma and Alaska, sexual education is not always encouraged in schools and is limited to promoting abstinence until marriage and discouraging certain sexual behaviors (Centers for Disease Control and Prevention). In Texas, nearly sixty percent of public schools used an abstinence-only education curriculum in 2017 (Pollock). According to Dr. David Wiley, a health education professor and researcher at Texas State University, abstinence-only programs in Texas provide misinformation to students, perpetuate stereotypes about gender, and exclude discussion about LGBT groups from the agenda (Pollock). In those areas, young men and women grow to misunderstand human reproduction and are not provided with comprehensive resources to fully understand their complex reproductive anatomy and natural processes, continuing the historical confusion surrounding female reproductive health.

Our reproductive medicine history also influences how people view sex and sexuality in the present. Negative associations from the past surrounding sex, like traditional physician views about gender, homosexuality, masturbation, and being frequently sexually active may have influenced some beliefs about sex that stuck around through time and might not be productive or helpful in society. Condemning natural bodily functions and sexual practices is common in media, and can cause people feel like sex is obscene and not ok to talk about in healthcare. Women continue to enter medicine, balancing the gender gap within the medical field, and some women no longer need to feel embarassed to discuss female reproductive health and sex, yet many still do.

In recent years, public discussions emphasizing gaining consent and preventing sexual harassment have become more common. What many do not know, however, is that some physicians still have practices that could be thought to devalue women's bodies, including

performing manual pelvic exams, involving inserting fingers into a woman's vagina and rectum, on anesthetized women without consent (Friesen). Physicians have reported that as medical students, they gave pelvic exams to unconscious patients under anesthesia as a learning opportunity, and that practice is still continued today. In some cases, the medical students are invited to perform pelvic exams, not for therapeutic purposes to benefit the patient or as a part of their medical treatment, but for practice purposes instead, using the female body as a learning tool (Hsieh). Teaching hospitals are not required to make obtaining explicit consent required for these exams ahead of time, and some physicians may view it as an unnecessary hassle, with too many women likely denying consent (Hsieh). While we no longer live in an era of Victorian caliber patriarchy, implicit bias about female patients still exist within the medical field that is leftover from medical practice of that time period. It is likely that many women would not consent to unnecessary pelvic exams while they are unconscious, which is all the more reason why it is the responsibility of physicians and the medical field to prioritize obtaining consent for female patients (Hsieh).

Though the medical field has evolved tremendously in the last one hundred years, there could be a reason to suggest that gendered thinking in the form of implicit bias still exists when treating female patients in some cases. Implicit bias describes attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious way (Kirwan Institute). Hysteria ideology may still persist in some areas throughout female health care. Some physicians today still practice with the understanding that some women's symptoms are exaggerated or created in their mind, or arising from a mental or emotional disturbance (RTI). Some health disparities are suggested to be rooted in hysteria ideology, like the fact that women with lupus, fibromyalgia, chronic fatigue syndrome and Parkinson's disease commonly are misdiagnosed, referred to other

physicians, undertreated, or have their treatment delayed before getting care (RTI). Similarly, women with heart disease are less likely to be given appropriate care (Daly et al.) According to a study published in *The New England Journal of Medicine* in 2000, women were seven times more likely than men to be misdiagnosed and discharged mid-heart-attack. This may be a result of physicians failing to recognize women's symptoms, which can differ widely from men's (Nabel), and failing to properly diagnose women based off of implicit bias that her condition is psychosomatic. There are many other factors that could also contribute to health discrepancies among genders for diagnoses, including hormones, differences in risk factors, differences in pain tolerance, and likelihood of seeking treatment. Only research into the differences between male and female specific processes, anatomy, physiology will help better explain those discrepancies.

As many women have been misinformed about their bodies throughout history, some women continue to lack access to tools for understanding their bodies today in the US. It could be that some women are satisfied or at least can tolerate knowing little about sexual wellness and health, misunderstanding the female body, and accepting that as the standard. In the twenty-first century, our available knowledge about female reproduction, arousal, and sexual function continues to grow, and with expanding resources available, widespread misunderstanding no longer needs to be the standard. Women in the US will hopefully continue to gain public interest in learning about their bodies and taking pride in their health.

In order to better serve women, medical schools can employ strategies and training in implicit bias and listening skills. Patients could also benefit from increased efforts in health literacy, and navigating the complexities of the healthcare system. Medical administrators can institutionalize standards-of-care checklists to overcome differences in individual physicians practice when treating female patients and male patients. Additionally research funders can insist

that gender and sex-related differences are analyzed and that female subjects are included in studies (RTI International). As a student entering the first year of an MD program in the fast-approaching months, respecting and preserving autonomy and providing comprehensive reproductive education with candid discussions about sex, sexual health, and sexuality to my female and male patients will be a priority.

REFERENCES

Adler, Kayla Webley. “Sexism In Medicine: Women are Dying Because Doctors Treat Us Like Men.” *Marie Claire* . 5 April 2017.

Andrei, Amanda. "James Marion Sims (1818--1883)" *The Embryo Project Encyclopedia*. 8 April 2013. https://embryo.asu.edu/pages/james-marion-sims-1813-1883

Barzansky, Barbara; Gevitz, Norman (1992). *Beyond Flexner: Medical Education in the Twentieth Century* (1. publ. ed.). New York: Greenwood Press.

Centers for Disease Control and Prevention "School Health Profiles 2016: Characteristics of Health Programs Among Secondary Schools." Atlanta: *Centers for Disease Control and Prevention*. 2017. https://www.cdc.gov/healthyyouth/data/profiles/pdf/2016/2016_Profiles_Report.pdf

Brody, Janet Ferrell. "Contraception and Abortion in Nineteenth Century America." Ithaca: Cornell, 1997.

Bullough,Vern and Marthab Voght "Women, Menstruation, and Nineteenth Century Medicine." *Woman and Health In America*. Madison: University of Wisconsin Press. 1984.

Daly, Caroline et al. "Gender Differences in the Management and Clinical Outcome of Stable Angina." *Circulation*. 31 January 2016. https://www.ahajournals.org/doi/pdf/10.1161/CIRCULATIONAHA.105.561647

Donegan, Jane B. "'Safe Delivered,' but by Whom? Midwives and Men-Midwives in Early America." *Woman and Health In America*. Madison: University of Wisconsin Press. 1984.

Friedman, Nancy. *Everything You Must Know About Tampons.* New York City: Berkley Books, 1981.

Friesen, Phoebe. "Educational pelvic exams on anesthetized women: Why consent matters." *Bioethics*. Vol 32, Issue 5. 23 April 2018. https://onlinelibrary.wiley.com/doi/abs/10.1111/bioe.12441

Greenspon, Christopher. "The secret home abortion movement that started in LA two years before Roe vs. Wade." *89.3 KPCC: Off Ramp.* 14 April 2017. http://www.scpr.org/programs/offramp/2017/04/14/56179/the-secret-home-abortion-movement-started-in-la-tw/

Hsieh, Paul. "Pelvic Exams On Anesthetized Women Without Consent: A Troubling and Outdated Practice." *Forbes.* 14 May 2018. https://www.forbes.com/sites/paulhsieh/2018/05/14/pelvic-exams-on-anesthetized-women-without-consent-a-troubling-and-outdated-practice/#310c47077846

Horwitz, Rainey, "Ann Trow (Madame Restell) (1812–1878)". *Embryo Project Encyclopedia* (2017-08-23). ISSN: 1940-5030 http://embryo.asu.edu/handle/10776/12979.

Horwitz, Rainey, "Barbara Seaman.". *Embryo Project Encyclopedia.* 25 May 2018. ISSN: 1940-5030 http://embryo.asu.edu/handle/10776/13065 .

Horwitz, Rainey, "Carol Downer". *Embryo Project Encyclopedia.* Forthcoming Publication

Horwitz, Rainey, "Evelyn Lorraine Rothman (1932–2007)". *Embryo Project Encyclopedia* 28 June 2017. ISSN: 1940-5030 http://embryo.asu.edu/handle/10776/11881.

Horwitz, Rainey, "Lydia Estes Pinkham (1819–1883)". *Embryo Project Encyclopedia* (2017-05-20). ISSN: 1940-5030 http://embryo.asu.edu/handle/10776/11505.

Horwitz, Rainey, "Lydia Pinkham's Vegetable Compound (1873-1906)". *Embryo Project Encyclopedia* (2017-05-20). ISSN: 1940-5030. http://embryo.asu.edu/handle/10776/11506.

Horwitz, Rainey, "Medical Vibrators for Treatment of Female Hysteria". *Embryo Project Encyclopedia.* Forthcoming Publication

Horwitz, Rainey, "Menstrual Tampons". *Embryo Project Encyclopedia.* Forthcoming Publication.

Horwitz, Rainey, "*Sexology* (1904) by William H. Walling ". *Embryo Project Encyclopedia.* Forthcoming Publication

Horwitz, Rainey, "*Sexual Hygiene* (1901) by The Alkaloidal Clinic". *Embryo Project Encyclopedia.* Forthcoming Publication.

Horwitz, Rainey, "'Some of The Uses of Electricity in Gynaecology,' (1901) by William H. Walling." *Embryo Project Encyclopedia.* Forthcoming Publication

Horwitz, Rainey, "The Boston Women's Health Book Collective". *Embryo Project Encyclopedia.* Forthcoming Publication

Horwitz, Rainey, "The Chicago Women's Liberation Union (1969–1977)". *Embryo Project Encyclopedia* 3 July 2018. ISSN: 1940-5030 http://embryo.asu.edu/handle/10776/13077

Horwitz, Rainey, "The First American Birth Control Clinic (The Brownsville Clinic)." *Embryo Project Encyclopedia.* Forthcoming Publication.

Horwitz, Rainey, "The Jane Collective (1969–1973)". *Embryo Project Encyclopedia* 7 August 2017. ISSN: 1940-5030 http://embryo.asu.edu/handle/10776/12969.

Horwitz, Rainey "Non-Medical Origins of Reproductive Health Solutions in the US." AAAS Annual Meeting Poster Abstract. 18 February 2018. https://aaas.confex.com/aaas/2018/meetingapp.cgi/Paper/22523

Horwitz, Rainey "Non-Medical Origins of Reproductive Health Solutions in the US." *The Embryo Project Encyclopedia.* Forthcoming Publication. (Honors Thesis)

Horwitz, Rainey, "Vaginal Speculum (after 1800)". *Embryo Project Encyclopedia.* Forthcoming Publication

Horwitz, Rainey, "Wandering Womb". *Embryo Project Encyclopedia.* Forthcoming Publication

King, Charles R. "Abortion in the Nineteenth-Century: A Conflict Between Women and Their Physicians." Women's Health Initiative. Vol 2, No.1 Spring 1992

Kirwan Institute for the Study of Race and Ethnicity. "Understanding Implicit Bias." *The Ohio State University* 2015.

Lines, Lisa M. "The Myth of Female Hysteria and Health Disparities among Women." *RTI International.* 9 May 2018. https://www.rti.org/insights/myth-female-hysteria-and-health-disparities-among-women

Maines, Rachel. *The Technology of Orgasm.* Johns Hopkins University Press: Maryland 1998.https://archive.nytimes.com/www.nytimes.com/books/first/m/maines-technology.html

Morus, Iwan Rhys, *Frankenstein's Children: Electricity, Exhibition, and Experiment in Early-nineteenth-century London*, pp. 234-237, Princeton: Princeton University Press, 1998

Nabel, Elizabeth G. "Coronary Heart Disease in Women— An Ounce Of Prevention." *The New England Journal of Medicine.* 24 August 2000.

Norsigian, Judy and Miriam Howley. "Boston Women's Health Book Collective BWHBC: Our Bodies, Ourselves." MAKERS Video. 2018 https://www.makers.com/boston-womens-health-book-collective_

Nunez-Eddy, Claudia,, Malladi, Lakshmeeramya, "Margaret Higgins Sanger (1879-1966)". *Embryo Project Encyclopedia* 13 October 2016. ISSN: 1940-5030 http://embryo.asu.edu/handle/10776/11365.

Pollock, Cassandra. "Study: A quarter of Texas public schools no longer teach sex ed." The Texas Tribune. 14 February 2017. https://www.texastribune.org/2017/02/14/texas-public-schools-largely-teach-abstinence-only-sex-education-repor/

Reagan, Leslie J. *When Abortion Was a Crime.* Berkeley: University of California Press. 1977.

Riddick, Frank A. "The code of medical ethics of the american medical association." *The Ochsner journal* vol. 5,2 (2003): 6-10. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3399321/

Rosenberg, Charles and Carroll Smith Rosenberg. "The Female Animal: Medical and Biological Views of Woman and Her Role in Nineteenth-Century America. *Woman and Health In America*. Madison: University of Wisconsin Press. 1984.

Seward, Sheridan. "The Comstock Law (1873)" *The Embryo Project Encyclopedia.* 13 January 2009 https://embryo.asu.edu/pages/comstock-law-1873

"She's Beautiful When She's Angry." She's Beautiful When She's Angry. Accessed November 12, 2017. Shesbeautifulwhenshesangry.com

Starr, Paul. "The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry." New York: Basic Books, 1982.

The Alkaloidal Clinic, *Sexual Hygiene.* Chicago: The Clinic Publishing Company, 1901

Tasca, Cecilia et al. "Women and hysteria in the history of mental health." *Clinical practice and epidemiology in mental health : CP & EMH* vol. 8 (2012): 110-9. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3480686/

Thompson, Lana. "The Wandering Womb: A Cultural History of Outrageous Beliefs About Women." New York: Prometheus Books. 1998. https://books.google.com/books?hl=en&lr=&id=66H_bRK5JJQC&oi=fnd&pg=PA1&dq=wandering+womb&ots=z-Ru39KzLJ&sig=PA_LISYnMNE5VWuFJtKQokd8iXw#v=onepage&q=wandering%20womb&f=false

VandenBerg, Nicole, and Shailendra Prasad. "Easing the discomfort of a speculum exam." *The Journal of family practice* vol. 61,9. 2012. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3601690/ .

Vostral, Sherra L. *Under Wraps: A History Of Menstrual Hygiene Technology.* Lanham: Lexington Books. 2008.

Walling, William H. *Sexology*: *Family Medical Edition*. Puritan Publishing Company: Philadelphia 1904.

Walling, William H. "Some of The Uses of Electricity in Gynaecology," *The American Gynaecological and Obstetrical Journal.* New York, 1901. https://books.google.com/books?id=aJ4gAQAAMAAJ&lpg=RA1-PA122&ots=abMYEHjz68&dq=%22Eastern%20College%22%20of%20Gynecology%20philadelphia&pg=RA1-PA122#v=onepage&q&f=true