"The Role of Urethra in Female Orgasm" (1950), by Ernst Gräfenberg

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In 1950, physician and researcher Ernst Gräfenberg published "The Role of Urethra in Female Orgasm," in the International Journal of Sexology. The article was one of the first to mention the area in the anterior, or front, vaginal wall colloquially called the G-spot. In the article, Gräfenberg acknowledges that many females experience problems related to sexual satisfaction, and he argues that researchers and physicians of the time did not know enough information about the anatomical mechanisms and localization of the female orgasm to help them. He claims that there is a distinct zone in the anterior vaginal wall along the urethra that plays a critical role in female sexual pleasure, making it important for physicians to consider when treating females' sexual problems. Though researchers are still debating the structural existence of the G-spot as of 2022, "The Role of Urethra in Female Orgasm" was one of the first publications to explore the anatomical elements of the female orgasm, and it led to further research about female sexuality that has helped many individuals to better understand female pleasure.

At the time of writing "The Role of Urethra in Female Orgasm," Gräfenberg was running a private gynecological practice in New York City, New York, and working with Mount Sinai Medical Center at Mount Sinai Hospital in New York City, which, as of 2022, is one of the largest hospitals in the United States. Gräfenberg spent much of his life studying sexology, or the study of human sexuality, developing contraceptives such as the Gräfenberg ring, one of the first intrauterine devices, or IUDs, as a method of birth control and treating patients at various gynecological centers. According to Beverly Whipple, a sexology researcher and professor at Rutgers University in New Brunswick, New Jersey, Gräfenberg’s years of treating and helping female patients may have led to his focus on studying their reproductive and sexual needs.

The ideas that Gräfenberg puts forth in "The Role of Urethra in Female Orgasm" differed from those of other sexologists of his time. During the mid-1900s, researchers largely claimed that females who experienced what they referred to as sexual problems or dysfunctions, such as a lack of sexual desire or the inability to reach sexual climax, must have nervousness or mental illness that caused the dysfunctions. Many sexologists used the term frigid to describe females who had such sexual problems. Though researchers used differing criteria when labeling females as frigid, the term itself means unable to achieve orgasm during sexual intercourse. As of 2022, medical practitioners no longer use the term frigid to describe females. Nonetheless, until the late 1900s, many researchers thought that females' mental state or mental inhibitions caused what they referred to as their frigidity. Because of that perspective, researchers and physicians often searched for psychological rather than physiological explanations when assessing why females had trouble reaching climax. In "The Role of Urethra in Female Orgasm," Gräfenberg was one of the first researchers to examine the physiological mechanisms of the female orgasm and provide potential anatomical reasons for why many females could not achieve it.

Gräfenberg does not split "The Role of Urethra in Female Orgasm" into sections, but he does organize it by exploring seven general arguments. First, Gräfenberg claims that many sexologists have differing and often problematic definitions of female sexual satisfaction, especially because many of them limit their idea of female pleasure to the occurrence of vaginal orgasm. Next, he points out that the female body contains a plethora of erogenous zones, or areas that elicit sexual satisfaction, yet researchers have inadequate knowledge about the specific mechanisms and organs involved in final climax. Third, Gräfenberg argues that there is a distinct erogenous zone in the anterior wall of the vagina along the course of the urethra, and he explains that his personal and clinical experiences with females support the zone’s existence and importance to climax. Fourth, he explains that the cervix does not contribute to the female orgasm. Then, he briefly describes the physiology of female ejaculation and points out that it often occurs when someone stimulates the erogenous zone in the anterior vaginal wall. Sixth, he explores the idea that the signs and degree of female satisfaction vary depending on the method and location of stimulation, and he argues that the most satisfactory methods and responses are associated with that zone. Gräfenberg concludes by explaining that he hopes the article exemplifies that the anterior wall of the vagina along the urethra is a distinct erogenous zone that doctors should consider when treating female sexual deficiency.

Gräfenberg uses the terms "woman" and "female" interchangeably in "The Role of Urethra in Female Orgasm." However, in this article, only the word "female" will be used when summarizing Gräfenberg’s conclusions because his findings relate to characteristics of biological sex rather than gender.

In "The Role of Urethra in Female Orgasm," Gräfenberg discusses various organs and their involvement in female orgasm. Regarding the external female genitalia, also called the vulva, or the components of the female reproductive system that are visible from the outside of the body, Gräfenberg discusses the labia minora, clitoris, and vagina. The labia minora are the small, inner folds of the vulva, and the clitoris is a small, sensitive organ located at the upper end of the vulva just above where the labia minora meet. The vagina is a canal that leads from the internal female genitalia to the outside of the female body, and the entrance to the vagina is visible from the outside of the body at the base of the vulva. Gräfenberg mentions various internal female genitalia as well, including the uterus and cervix. The uterus is a hollow organ where fetuses develop when a female is pregnant, and, though the cervix has its own name, anatomically, it is just the lowest and narrowest region of the uterus. It forms a canal that connects the uterus to the vagina.
and the vagina[9] in females, and it helps keep foreign bacteria from entering the uterus[12] and other internal organs. Finally, Graefenberg refers to female body parts that are not involved in the female reproductive system, such as the urethra and anus. The urethra is the canal that carries urine from the bladder out of the body, and its entrance is located between the clitoris and vagina[9], whereas the anus is the final portion of the large intestine from which feces exits the body. The anus sits behind the vagina[9].

Additionally, Graefenberg differentiates between various types of female orgasms in "The Role of Urethra in Female Orgasm." An orgasm is a rapid, often pleasurable release of tension that occurs at the climax of sexual arousal or excitement. Researchers often differentiate specific types of female orgasms based on the body part that a female or their partner stimulates to cause the orgasm. Thus, a vaginal orgasm is one that occurs when a female or their partner stimulates their vagina[9] until they reach climax, whereas a clitoral orgasm is one that occurs when a female or their partner stimulates their clitoris until they reach climax.

Grafenberg first argues that sexologists have inconsistent definitions and understandings of female satisfaction. In his opening statement, Grafenberg states that a high percentage of females do not reach sexual climax during sexual intercourse[8], and he explains that many sexologists previously estimated that between ten and eighty percent of females are sexually frigid. However, he points out that each researcher used drastically different definitions of frigidity to determine those frequencies, making the statistics incomparable. According to Grafenberg, some researchers considered a female frigid if they could not experience vaginal orgasm, which produced a much higher estimated percentage than that of researchers who only considered a female frigid if they did not experience any sexual satisfaction at all.

After explaining some of the existing definitions of frigidity, Grafenberg claims that restricting female sexual satisfaction to the vaginal orgasm does not provide a true picture of female sexuality. He argues that researchers and physicians should only consider a female frigid if they do not have a sexual response to any partner in any sexually stimulating situation. He exemplifies that idea by explaining that lesbians who are not sexually satisfied by males but are satisfied by females do not count as frigid, nor do females who cannot reach orgasm with one male partner but can with another, females who only experience clitoral orgasms, or females who feel sexually satisfied without reaching orgasm at all. Grafenberg then proposes that the high percentage of females who do not reach sexual climax is caused by factors such as the lack of stimulation of neural organs, including both the small labia, often referred to as the labia minora, and the pubic region of the abdomen. Beyond genitalia, Grafenberg explains that nipples, breasts, and anus are also erogenous zones that females or their partners can stimulate to produce orgasm.

In his second argument, Grafenberg states that the female body has an almost infinite number of erogenous zones. Yet, despite abundant literature on female orgasm, researchers have insufficient knowledge regarding the physiological process of final climax and the areas of the body that one must stimulate for it to occur. He explains that even though many individuals may assume that the clitoris is the only organ involved in sexual excitement, in reality many organs can help trigger orgasm upon stimulation. He discusses that sometimes, in menopausal females, or females who are of the age when they naturally stop having menstrual periods, the clitoris can become inflamed and hypersensitive, which, he says, deteriorates its ability to produce orgasm. According to Grafenberg, when that occurs, the clitoris' ability to produce orgasm shifts to other surrounding genital organs, including both the small labia, often referred to as the labia minora, and the pubic region of the abdomen. Beyond genitalia, Grafenberg explains that nipples, breasts, and anus are also erogenous zones that females or their partners can stimulate to produce orgasm.

Third, Grafenberg claims that the female body contains a distinct erogenous zone in the anterior wall of the vagina[9] along the course of the urethra, hereafter the G-spot. He explains that some sexologists think that the vaginal wall does not contain nerves and, therefore, females cannot experience vaginal orgasm. However, he claims that this is not the case because the anterior vaginal wall does contain nerves, specifically near the base of the clitoris at the G-spot.

Grafenberg then explains that his personal experiences with multiple females act as evidence that the G-spot exists. He states that in his experience, one can more easily use their fingers to stimulate the G-spot than other areas of the vagina[9], and he says that females can tell when their partner’s finger moves away from the area because it impairs their sexual stimulation. He explains that during orgasm, the G-spot presses down against the finger that is providing stimulation, almost as if the area attempts to bring itself in closest possible contact with the finger, and he says that after a female reaches orgasm, the area completely relaxes. Grafenberg then claims that all females have a G-spot.

Grafenberg also states that females can reach orgasm by stimulating other parts of their urethras. He explains that two of his previous patients told him that they moved old-fashioned hairpins in and out of their urethras to stimulate the area and experienced orgasm as a result. He then describes the story of a male patient who had moved a bullet in and out of his urethra for pleasure, and he uses the story to show that males can also experience sexual pleasure by stimulating their urethras. To explain those phenomena, Grafenberg proposes that erectile tissue surrounds both the male and female urethra and enlarges during sexual stimulation.

To further support the existence of the G-spot, Grafenberg says that many females experience difficulty reaching orgasm if they are unable to stimulate that area of their vagina[9]. For example, he explains that many of his previous patients complained that they had difficulty reaching orgasm when they were using contraceptives that covered their G-spot. Then, once doctors removed the device and replaced it with other forms of contraceptives that did not cover the G-spot, those females were able to experience orgasm again. Additionally, Grafenberg explains that females could become frigid if surgeons removed their G-spot during a hysterectomy[13], a procedure in which a surgeon removes all or part of a female’s uterus[12]. Though hysterectomies as of 2022 typically only involve the uterus[12], Grafenberg explains that at the time, it was not uncommon for surgeons to remove large parts of the vagina[9] during the procedure as well, including portions of the anterior wall, which then led to what he referred to as frigidity.

In his fourth point, Grafenberg claims that other areas such as the cervix[10] and uterus[12] are not involved in the process of female orgasm. He explains that many researchers previously believed that the cervix[10] sucked sperm[14] up into the uterus[12] during orgasm. Then, he outlines an experiment in which researchers disproved that theory. According to Grafenberg, the researchers filled a plastic
cervical cap, a form of contraceptive used at the time, with oil and fitted it to females’ cervixes, and they left the cap there for multiple
weeks between two menstrual cycles. Gräfenberg details that the participants had frequent sexual intercourse that resulted in orgasm
while the cap was in place, yet when the researchers took X-rays of the female’s bodies at the end of the study period, they found that
the oil had not moved from the cap. Gräfenberg explains that the results prove the cervix therefore does not have suction power, and he
concludes that the cervix therefore does not play a role in female orgasm.

Then, fifth, in reference to what researchers often call female ejaculation, Gräfenberg describes that many females expel large amounts
of clear fluid just before or during orgasm when they or their partner stimulates their G-spot. He explains that many females who had
experienced that fluid expulsion concluded that they had urinary incontinence, or the inability to control their bladder, during intercourse
because they produced such large amounts of the fluid from their urethras. However, Gräfenberg points out that the fluid does not
contain the chemical components of urine, so it must be something else entirely. He then contrasts the fluid with vaginal mucus, a
lubricating substance most female bodies produce in their vaginal glands during the beginning of sexual stimulation. He states that the
fluid differs from vaginal mucus because the female body produces it at the end of intercourse rather than the beginning, and he argues
that the timing of fluid expulsion means that lubrication could not be its purpose. Instead, he claims that the fluid is a urethral secretion
that occurs when one stimulates the G-spot.

Sixth, Gräfenberg explains that the intensity of the female orgasm depends on a variety of factors, including the location, time, and
mode of stimulation. He explains that cunnilingus, or oral sex performed on a female, leads to more complete female orgasms than
other forms of sexual stimulation. Then, he explains that some females experience greater sexual desire during specific times in their
menstrual cycle. For example, he says that some females have greater sexual desire during ovulation, the phase of the female menstrual
cycle when an egg is released from the ovaries for possible fertilization, whereas others may have greater sexual desire during menstruation, the monthly process of a female discharging blood from the lining of the uterus, possibly because the risk of unwanted pregnancy is lower during that time. Additionally, Gräfenberg explains that specific sexual positions during heterosexual intercourse affect the intensity of the female orgasm because the position determines the angle of the penis and therefore the area of the vaginal wall that the penis stimulates. He states that positions that are most stimulating for females are those in which the penis contacts the G-spot, and he claims that the G-spot is a primary erogenous zone in females, perhaps even more so than the clitoris.

Finally, Gräfenberg concludes that he hopes “The Role of Urethra in Female Orgasm” will show that the anterior wall of the urethra, or the G-spot, is the seat of a distinct erogenous zone, and, therefore, doctors and sexologists should consider it when treating female sexual deficiency.

According to Google Scholar, as of 2022, over 350 publications have cited the article, “The Role of Urethra in Female Orgasm.” However, researchers had published fewer than a dozen of those articles prior to 1980, showing that at the time of its publication, researchers paid little attention to the work. Thus, for the first thirty years after publication, the article had minimal impact on society. Then, in 1981, a group of six researchers who each studied different issues related to female sexuality, primarily at Dalhousie University in Halifax, Canada, published the article, “Female Ejaculation: A Case Study.” The authors of that article used a case study of one female to show that the area along the urethra that Gräfenberg discusses in “The Role of Urethra in Female Orgasm” is indeed a distinct erogenous zone that, when stimulated, can cause female ejaculation. Those researchers named the area the Gräfenberg spot, more commonly called the G-spot, after Gräfenberg, which drew some attention to his work. The following year, two of the coauthors of “Female Ejaculation: A Case Study,” John B. Perry and Beverly Whipple, joined Alice Kahn Ladas, a researcher who studied various aspects of women’s health, in writing a book titled The G Spot and Other Recent Discoveries About Human Sexuality. That book explored many ideas related to female pleasure and popularized the term G-spot.

Both publications then sparked a scientific debate about whether the G-spot is actually a distinct anatomical structure. Those who argue that the G-spot is a distinct anatomical structure claim that it is a discrete area of the body that is entirely separate from other pleasure-inducing sex organs. Those who disagree with this idea often claim that the G-spot is simply an area where the internal structures of the clitoris and urethra come in close contact with the vaginal wall. Thus, they conclude that when someone stimulates the G-spot to produce pleasure, they are just stimulating an internal portion of the clitoris or the urethra, rather than a distinct body part.

Though researchers have acknowledged that the area of the vagina referred to as the G-spot is highly sensitive, as of 2022, they have not proven that it is a discrete anatomical structure. In 2017, a group of researchers from Australia and Canada dissected thirteen human female cadavers to characterize the anatomy of their vaginal walls and found that the cadavers did not have erectile or “spongy” tissue in the anterior vaginal wall where other researchers had speculated that the G-spot was located. Therefore, the authors concluded that the G-spot is not a discrete anatomical entity. However, four years later, in 2021, a group of researchers from Portugal, Italy, and the United States published a review article analyzing thirty-one studies on the G-spot, and the researchers found that of those studies, most concluded that the G-spot actually is its own anatomic entity. However, they noted that the researchers who conducted the studies disagreed with one another about the location, size, and nature of the area. As of 2022, researchers and doctors continue to engage in debate over the existence and characteristics of the G-spot.

Since Gräfenberg’s publication of “The Role of Urethra in Female Orgasm,” most doctors and researchers have begun to look beyond females’ mental state when trying to understand why some experience difficulty reaching orgasm. As of 2022, many professionals recognize various physiological and medical conditions that may explain why some females experience such sexual difficulties. Researchers have still found that some mental and emotional factors, such as sexual performance anxiety and low self-esteem, correlate with females’ difficulty reaching orgasm. However, those researchers typically blame social and male expectations for causing the difficulties rather than the females who are experiencing them.

“The Role of Urethra in Female Orgasm” was one of the first articles to discuss female sexual satisfaction in a scientific and anatomical
manner. Many researchers at the time considered vaginal orgasms the only form of true female sexual satisfaction, and if a female
experienced any sexual difficulties, they typically blamed the individual’s mental health rather than searching for possible physiological
explanations. In "The Role of Urethra in Female Orgasm,” Gräfenberg acknowledges that doctors and researchers needed to learn
more about the anatomical elements of the female orgasm before they could help treat females’ sexual problems. Since the article’s
publication, researchers have continued to study the anatomy of female pleasure, and their findings not only help doctors to understand
and treat sexual difficulties, but they also help females to better understand and care for their own bodies.

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