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Re-envisioning fertility science: From J. Marion Sims's invasive gynecology to Sophia Kleegman's "conservative surgery" hermeneutic

Robin E. Jensen 

Department of Communication, University of Utah, Salt Lake City, Utah. USA

ABSTRACT

This essay explores the discursive means by which ingrained trajectories of medical knowledge and practice have been re-envisioned and recalibrated in U.S. history. It takes for its case study the development of the field of fertility science and medicine, which is an outgrowth of Dr. J. Marion Sims's notorious, nineteenth-century gynecological tradition of invasive and injurious surgeries targeting the female body. More specifically, this essay offers a critical-comparative analysis of Sims's mid-to-late-nineteenth-century medical publications and Dr. Sophia Kleegman's mid-twentieth-century medical publications to highlight the differing pedagogies of sight at work therein. The analysis reveals that—in contrast to the objectivist, myopic, and exclusively female-focused visual pedagogy that Sims articulated—Kleegman's pedagogy provided disciplinary readers with a distinct, "conservative surgery" hermeneutic for scientific study and treatment that illuminated new diagnostic heuristics related to the proximity of pain, the scale of efficiency, and the boundaries of corporality and expertise. In this way, Kleegman's articles instantiated an alternative disciplinary optics that balanced past ways of seeing with emergent, ethically calibrated modes of clinical judgement. Ultimately, this technical intervention into medical vision facilitated the realization of increasingly humane and effective practices across reproductive medicine and fertility science beginning in the mid-to-late-twentieth century.

KEYWORDS

Feminist science studies; gynecology; rhetoric of health and medicine; rhetorical history; visual communication

Toward the end of a 1936 *American Journal of Surgery* article on "Sterility," Dr. Sophia Kleegman opined that "in no field of therapy has the human body been so frequently assaulted as has that of the barren woman."¹ There and across her other scientific publications, Kleegman decried the clinical tradition of "subject[ing]" the involuntarily childless woman to "useless" surgical interventions and invasive treatments that had no possibility of inducing pregnancy, particularly in cases where the (unexamined and untreated) male partner "was responsible for the infertility."² Her appeals were part of a "conservative surgery" campaign that she championed from within the emergent

field of fertility science, one that drew from what rhetorican Susan Wells identifies as “women physicians’ common (but not universal) preference for conservative therapies” from the nineteenth-century into the twentieth.³ The campaign’s longitudinal success—evidenced by changes in subsequent surgical practice—was facilitated in no small part by Kleegman’s recalibration of a medical tradition and trajectory born from sacrificing the bodies and lives of enslaved and immigrant women.⁴

Indeed, notorious “father” of modern gynecology, Dr. J. Marion Sims, made a name for U.S. medicine in the mid-nineteenth century by publicizing the results of his unanesthetized surgical interventions on Black, enslaved women and poor, Irish-immigrant women suffering from reproductive problems.⁵ His experimentation served the interests of plantation owners and industrialists alike looking to sustain their workforces, whether via “breeding” or “limitation.”⁶ With the establishment of Sims’s prestigious New York Woman’s Hospital in 1855 and the increasingly effective use of anesthesia and antisepsis techniques in surgery writ large, Sims went on to expand his patient-base to include middle-to-upper-class, white women in the United States and Europe, all the while singing the praises of his approach and proving a “consummate proselytizer of surgical treatments for a wide variety of female complaints.”⁷ Ultimately, the medicalized, economic gaze through which Sims and his fellow “woman’s doctors”⁸ justified their endeavors institutionalized the use of invasive and injurious gynecological surgeries, positioning the women upon whom they operated as objective means to an end and creating an abiding pedagogical infrastructure for associated fields such as fertility science.

Kleegman’s publications, which spanned more than four decades (1934–1966) and were featured in a range of major scientific outlets,⁹ represent one of the earliest and most efficacious attempts from within fertility science and medicine to upset the Simsian tradition of invasive gynecology. Having immigrated from Russia herself and advocated for women’s right to reproductive autonomy,¹⁰ Kleegman was appalled by the practices that she encountered while earning her M.D. at Bellevue Hospital Medical College and completing her residency at Chicago’s Lying-In Hospital. Years later, she would recall medical basins filled to overflowing with amputated ovaries, cysts, and other reproductive tissues following just one day in the gynecological surgery ward, each unit of bodily waste representing a woman who—in more cases than not—had no need of surgical intervention in the first place.¹¹ When Kleegman became the first woman on faculty at New York University’s College of Medicine in 1929, she devoted herself to shifting the field’s invasive course from the inside out, a task that she knew had to unfold on the pages of top scientific journals because they functioned as a definitive site for scientific knowledge production and clinical, gynecological pedagogy.¹² By the time she was named Director of NYU’s renowned Infertility Clinic in 1958, a position that she held until her death in 1971, Kleegman was recognized as a “pioneer in human fertility” who managed—through her writings, scientific studies, and clinical work—to usher in a new era of reproductive medicine guided increasingly by comprehensive, integrative fertility care.¹³

Today, her efforts are notable not only because of their significant impact on fertility science and medicine specifically but also because they provide broader insight into the means by which a scientific, medical discipline can be steered in increasingly humane, patient-centric directions. In the case at hand, I find that Kleegman’s publications

helped to alter the practices of fertility science and medicine by articulating an innovative vision—what rhetorician Jordynn Jack theorizes as a “pedagogy of sight” or an “explicit, didactic attempt to teach a new way of seeing to an audience”—for gynecological diagnosis and treatment.¹⁴ As Kleegman composed study results, reviewed literature, and relayed surgical outcomes, she did so in ways that put forth the involuntarily childless body not as a singular object to be unequivocally intervened upon, but as a point of dynamic inhabitation, rich with embodied insight and worthy of sustained, systematic inquiry. Moreover, her publications delineated a hermeneutic for envisioning that body through what she called a “conservative surgery” lens, one that illuminated different aspects of the body than did existing pedagogies and thereby supported the development of an alternative mode of “trained vision.”¹⁵ Although Kleegman’s vision could be justified in terms of existing medicalized warrants related to efficacy and successful outcomes, it was also grounded in illuminating new clinical topoi related to: (a) the perception of pain through proximity, (b) a re-scaled evaluation of efficiency, and (c) an extended conceptualization of corporeal boundaries and scientific expertise. In this way, her pedagogy of sight provided the field’s partitioners with a fresh, yet seemingly consistent and robust, infrastructure for constructing fertility science and medicine anew in the years to come.

In what follows, I build my case for this account of fertility science’s twentieth-century evolution by, first, outlining the vision of gynecological treatment delineated by Sims, as well as by other early woman’s doctors in the nineteenth century. From there, I draw from a comparative, critical-rhetorical analytic to consider Kleegman’s mid-twentieth-century scientific publications and demarcate the emergent pedagogy of sight and hermeneutic that she employed therein. On the whole, this analysis illustrates how technical pedagogies of sight, particularly those that offer clear, alternative scripts for “clinical judgment,”¹⁶ can effectively engage, disrupt, and thereby re-envision a detrimental scientific trajectory in ways that, as philosopher Donna Haraway explains, “build meanings and bodies that have a chance for life.”¹⁷

Scientific vision and bodily violence in early U.S. gynecological surgery

Science, according to Haraway, is an extensive “knowledge project” wherein “cacophonous visions and visionary voices” advocate on behalf of a series of lenses for seeing—and thereby constituting—rationality. Advocates for any one such lens produce and circulate “visualization technologies” designed to teach or, as Haraway writes, embed practitioners with new “means for understanding and intervening.”¹⁸ These technologies, which range from descriptive guides to specialized, physical viewing devices, are the means by which emerging pedagogies of sight take hold and come to predominate. Their function is to focus the gaze so convincingly and with such strategic illumination that other ways of seeing are rejected and ultimately fall by the wayside. At its core, Haraway contends that this process wherein one scientific vision is perpetuated over others is grounded in struggle and even implicit violence in that there is significant power in setting a visual agenda.¹⁹ In some scientific trajectories, such as the development of U.S. gynecology and fertility science, that violence goes well beyond suggestion in that numerous women suffered indescribable physical and emotional brutalities so that Sims and his compatriots could legitimize their work. Haraway’s query—“With

whose blood were my eyes crafted?”²⁰—functions as an especially pressing entreaty in light of such cases, illustrating the import of tracing how violence wrought by specific scientific visions came to be, was sustained, and was (or might be) intercepted and moderated.

In Sims’s instance, his gynecological research and the specific scientific vision that he and others perpetuated emerged in concert with a number of impactful socio-cultural dynamics of the time. For one, and as historian Londa Schiebinger notes, nineteenth-century medicine in Europe and the United States was grounded in the assumption that the female body was but an inferior version, a “sexual subset,” of the male, and that to treat the female body was therefore to attempt to alleviate flaws endemic to the whole.²¹ Menstruation was consistently upheld as proof of such flaws. Women, it was contended, could never be made healthy in the ways that men could be, and physicians expected that the women in their care would fall victim to their bodies’ inherent pathologies to some extent always. Moreover, women’s physiological inferiority was believed to dovetail and overlap with deficiencies in their cognitive abilities as well in that predominate energy conservation theories dictated that women’s reproductive systems commandeered the energy that their male counterparts devoted to cognition.²² In this respect, all women were considered unreliable sources of information, including information concerning their own embodied experiences, in light of their weak physio-cognitive constitution.

At the same time, nineteenth-century scientists and medical practitioners also upheld the idea that different races of people had distinct physiological structures and capacities, and that women represented the inferior version of the men of their race. What this reasoning ultimately wrought in terms of medicine was the idea that Black (and Indigenous and Irish) women were physiologically inferior specifically to Black (and Indigenous and Irish) men and that—due to their unique racial profile—Black women (even more so than Indigenous and Irish women) were nonetheless much heartier than were comparatively fragile, supposedly more civilized, white women.²³ In this framing, white women were understood to experience physical pain more extensively and far less easily than Black women, particularly in matters sexual or reproductive in nature wherein they were believed to bear also an unyielding sense of modesty and propriety that Black women did not.²⁴ Enslaved Black women’s ability to work long hours on the plantation field, side by side with men and even while pregnant or giving birth, was ascribed to their race’s physiological characteristics and upheld as proof that they were biologically destined for hard labor and extensive child bearing.²⁵

Such reasoning was employed explicitly when nineteenth-century scientists and practitioners experimented and operated on enslaved women without their consent and without due concern for their pain or overarching well-being. Historian Deidre Cooper Owens highlights the inconsistency inherent in this rationale in that early gynecologists experimented on Black women—and subsequently Irish immigrant women—particularly because they understood them to be physiologically distinct from other races of women; but they employed their findings as grounds for generating surgical treatments for white, middle-to-upper-class women, albeit with the understanding that white women could withstand the surgeries only under anesthesia. This discrepancy in and of itself, Owens argues, reveals that early scientists and clinicians did not, in fact, completely believe that these racial differences existed, and yet they were willing to

leverage such contentions to justify the ethically unjustifiable choices they made to build a specialized, scientific discipline.²⁶

To be sure, another key socio-cultural factor contributing to Sims's vision of reproductive medicine was that, by the early nineteenth century, U.S. science and medicine "still required considerable development" and had achieved little by way of international legitimacy or recognition.²⁷ Sims himself was part of a larger movement set on distinguishing U.S. medical practice through the development of a specialty focused on treating the "functions and diseases" specific to women, including, first and foremost, injuries sustained during childbirth.²⁸ Although this specialization, which came to be known as gynecology by the 1870s, developed in concert with that of obstetrics and midwifery, it was ultimately set apart from these other specialties by its unique focus on methods of aggressive surgical intervention.²⁹ Sims, as well as other U.S. physicians-turned-surgeons such as John Peter Mettauer, Ephraim McDowell, and François Marie Prévost, tested a range of diverse though consistently brutal surgical techniques on some of the country's most vulnerable and precarious inhabitants.³⁰ These practitioners are known today for having a "general level of ignorance" concerning female physiology and reproductive biology, as well as a definitive lack of experience operating on live patients.³¹ Medical ethicist Harriet Washington explains that such conditions made for gruesome surgical scenes characterized by patients' "bone-chilling shrieks" and the enlistment of assistants (sometimes other patients-cum-nurses) to hold tormented women down.³² This nearly unfathomable data-collection process is what ultimately produced early versions of many of the tools and techniques that came to define gynecological surgery and related fields in the years to come. Having unfettered access to women's bodies from these particular groups was, more than anything else, what made this work possible and ensured that the United States (a nation at the time with legal slavery, though no international slave trade, and no infrastructure for the support of immigrants) became a locus of this medical specialization. The era's laws of Victorian propriety demanded that male doctors neither see nor even in some cases touch the naked bodies of white women, but such laws were not applied to the bodies of Black and Irish-immigrant women.³³ Thus, only by operating on women who made up what has since been recognized as a "servile class of medical specimens"³⁴ were Sims and his colleagues able to generate the experimental data that ultimately put U.S. medicine on the international map.

Historian Deborah Kuhn McGregor argues that the reason why Sims specifically has been upheld as the founder of modern, U.S. gynecology is that, in the early days of his surgical career, he was able to garner more and sharper data than others; he especially "had a singular, extenuated access to slave women. And he capitalized on the women's kept presence in [his] hospital by repeating surgeries on them—surgeries that many others carried out on pigs, dogs, and other animals."³⁵ In the early 1850s, Sims published the first of several scientific articles wherein he reported on the over 40 experimental, vesico-vaginal fistula surgeries he did without anesthesia on three enslaved women under his care at his plantation hospital in Montgomery, Alabama (his patients have since been identified as Anarcha Westcott, Betsey Harris, and Lucy Zimmerman, and recognized for their roles as assistants to Sims and even healthcare providers in their own right).³⁶ Sims performed these surgeries in the 1840s when anesthetics such as ether, nitrous oxide, and chloroform were little understood and their use in surgery

was under widespread debate, a debate that ultimately lasted in one form or another until at least the 1870s.³⁷ This left Sims and many others operating in the 1840s in particular to forgo anesthesia in almost all surgical patients but especially in Black, enslaved patients who were believed to be far less sensitive to pain.³⁸ In his initial publication, Sims claimed to have found success in closing these—at the time common, though ravaging and debilitating—ruptures in the vaginal wall most often sustained during prolonged childbirth. Others working in this area read Sims’s publications and took up enthusiastically his methods and modes for envisioning gynecological diagnosis and treatment. Their efforts contributed to a 100% increase in published research on interventionist, “heroic” gynecological surgeries ranging from those aimed at closing fistulae to ovariectomies and even uterus repositioning via what Sims termed a “uterine elevator.”³⁹ Many of these publications’ authors reported wielding the now infamous—and highly theorized⁴⁰—Sims duck-billed speculum to dilate and inspect the recesses of the female body; experimenting with metal sutures and clamps as did Sims to try and minimize infection during extensive, often months-long and repeated patient-recovery periods; and, like Sims, packing antebellum surgical theaters with onlookers to display Black women’s naked bodies as a form of “testimony” to their own interventionist “prowess.”⁴¹ In this respect, the late-nineteenth-century optics that Sims helped to establish for U.S. gynecology—grounded as it was in medical racism and misogynistic exploitation—fostered a categorically distorted lens through which to view both the medical problems at hand and the patients who were believed to harbor them.

Sims’s optics of objectification, vilification, and myopia

Clear evidence exists throughout Sims’s publications that those under scientific and medical consideration in this context were upheld chiefly as “clinical matter” or objects for investigation and the harvesting of knowledge.⁴² Beginning with his earliest scientific articles on reproductive health, the central means by which Sims communicates about his medical subjects is via synecdoche, wherein he names a single body part or condition and employs that name as a stand-in for the whole person. For instance, in his 1952 article, “Treatment of Vesico-Vaginal Fistula,” published in the *American Journal of Medical Sciences*, he divides meticulously patients exhibiting different types of fistulae infections into distinct categories before writing, “I have never met with one of the last-named class [utero-vesical]; but of the others I have seen a great variety, embracing almost every possible shape and size.”⁴³ The women upon whom he operated surface from these pages as “cases,”⁴⁴ worth mentioning because of the classifiable properties of their bodily ills. He explains:

The cases that occurred to me early and which were given to me for the sake of experiment, will show the difficulties that had to be overcome, the many disappointments that had to be borne, and the ultimate success that crowned my efforts after the perfection of the mechanical contrivances.⁴⁵

The “difficulties” that Sims recounts are not those experienced by the women in his care—who were “given” to him to experiment on—but, rather, the hardships that he himself combatted while working to “perfect” his experimental medical techniques and surgical outcomes. Sims guides his readers, in this way, to view gynecological problems as

removed from the individuals experiencing them and requiring of only his own expert intervention to achieve universal resolution.

This distancing effect is magnified throughout his publications in that the “cases” Sims overviews are set distinctly apart from his disciplinary readers in terms of sex, race, and what Sims characterizes as the disgust-inducing nature of their physical conditions. At multiple points, he offers visceral, gratuitous portrayals of the vesico-vaginal fistula condition, noting that “the vagina may become inflamed, ulcerated, encrusted with urinary calculi, and even contracted; while the vulva, nates, and thighs are more or less excoriated, being often covered with pustules having a great resemblance to those produced by tartar emetic.”⁴⁶ Sims goes on to explain that “these pustules sometimes degenerate into sloughs . . . the clothes and bedding of the unfortunate patient are constantly saturated with the discharge, thus exhaling a disagreeable effluvium.”⁴⁷ By way of conclusion, Sims editorializes that one in such a state is “alike disgusting to herself and repulsive to others.”⁴⁸ Drawing from the theoretical work of feminist scholar Sara Ahmed,⁴⁹ rhetorician John Lynch maps the process of pulling away and distancing that tends to occur through appeals such as this that are designed to induce disgust in biomedical contexts. Lynch notes that, for all the capacity it has to bring people together in the experience of extreme sentiment, disgust also “has the capacity to foreclose further engagement with the issue. Instead of being disgusted at the conditions in which people have been placed, we might reject the people, doubling the harms they experience.”⁵⁰

Furthermore, rejection along these lines is made all the more likely when the induction of disgust is coupled with appeals to vilification, as was the case in Sims’s publications and the disciplinary rhetoric that circulated in its wake.⁵¹ In his research on matters of “sterility” specifically, Sims’s vision of the involuntarily childless woman’s body as disgusting and also inherently burdensome and even treacherous or malicious comes into stark relief. In a 1968 *British Medical Journal* article, for instance, the female body—for infertility as a pathology is contained wholly for Sims within the female—is constituted as a hostile terrain that spermatozoa, once released into its “gaping canal” following “coition,” must navigate and evade.⁵² Sims describes his own “fears” about the “uterus and its appendages,” citing its proclivity to “kill,” “poison,” and “eject” otherwise healthy spermatozoa. He characterizes the vagina generally and “vaginal mucus” specifically as the “perfect poison for the super-abundant spermatozoa,” especially because it works “quickly,” leaving “every spermatozoa dead.”⁵³ Likewise, he notes that “cervical mucus” has in many instances “killed—drowned, as it were” spermatozoa “by the very abundance of the secretion,” its “vitiated” nature accelerating destruction of the “living principle of the semen.”⁵⁴ Sims’s reporting on this subject often takes on the tempo and feel of a mystery novel, building up a sense of sustained suspense that leads into false hope and, finally, shock and horror following a dramatic revelation. He writes, for instance,

Now and then, after treatment for a month or more, I have found the mucus drawn from the lower segment of the cervical canal full of living spermatozoa, and I have supposed that the case was cured; but when I came to examine that drawn from the upper segment of the canal, near the *os internum*, they were nearly all dead.⁵⁵

In this way, Sims teaches his many disciplinary readers to envision the infertile body as female and (therefore) as inherently suspicious and malevolent, its poisonous secretions

and harrowing canals hailed as proof of deception and the potential for inducing senseless destruction. The trope of the monstrous maternal all-but jumps from these pages,⁵⁶ alerting readers to the significant harms lurking before their eyes in the bodies of female patients.

Given this framing, it is less than surprising that Sims championed in his publications dramatic and unsubstantiated surgical intervention on women's bodies as a superior means for countering reproductive ills. He hailed his approach as highly efficient in that the candidates he identified as most likely to instigate problems—women's reproductive parts and systems—were immediately accessed, adjusted, and/or excised. This wholehearted focus in Sims's pedagogy on internal segmentation guides readers, too, toward what rhetorician Martha Solomon characterizes as scientific "myopia" wherein a student or observer detaches entirely from those being described.⁵⁷ As Sims's readers learned to train their gazes and clinical judgements on individual, female body parts and to ascribe agency and intention to those parts, they also learned to see their patients as mere hosts or background to the scene rather than agents in their own right.

Certainly, the experiences of those upon whom Sims operated were not central to his research designs or reporting. This becomes clear in instances wherein Sims cannot help but gesture toward the ways in which patients endured great physical suffering at his own hand. For instance, in writing about vesico-vaginal fistula, he mentors his readers to prepare themselves for the challenges they will certainly encounter during surgery "by the bearing down, sobbing, straining, or even voluntary resistance of the patient."⁵⁸ At other points, he makes explicit reference to his patients' pain and suffering, but he does so to reveal the long periods of experimental failure that he endured before achieving surgical success. His fortitude (not theirs) is intended to be on display in these instances. In one especially appalling example, he recalls:

I operated on a case, and applied what I then supposed to be a faultless instrument. Everything progressed well for five or six days, the catheter remaining in the bladder intact for that length of time; but now it became necessary to remove it for the purpose of cleaning out the mucus and urinary concretions that were obstructing the free egress of the water. But here I was foiled. I could pull it down for, perhaps, an inch, when it suddenly stopped; then by letting it go, it would slip back into the bladder with a sort of jerk. It evidently seemed to be fastened there by some means that I could not exactly comprehend. Every reasonable effort to remove it proving abortive, I, at last, pulled it out by main force. On its removal, the secret of its retention was explained by the shreds of mucous membrane (some an inch long) hanging from each orifice on the under and lateral surfaces of the catheter.⁵⁹

Here and elsewhere, physical suffering on the part of women subjected to his experiments is radically minimized, largely because Sims's focus was on garnering results expeditiously (i.e. "by main force") and accounting for patient sensation seemed, from this perspective, to slow medical progress.⁶⁰ Even when he employed anesthesia among middle-to-upper-class, white surgical patients in the late 1850s and 60s, Sims's writings imply that he did so in large part not only because he believed them to be unable to withstand the pain that Black and Irish-immigrant women withstood but also in an effort to remove pain's attendant distractions from the long list of variables that had to be navigated by surgeons during an intervention.⁶¹ His goal was to move quickly at all costs. Accordingly, his medical publications upheld this goal by training readers' eyes on speedy, surgical

interventions that necessarily involved overlooking and devaluing diagnostic signs related to individual patient experience and long-term outcomes.⁶²

Kleegman's pedagogy of sight in three illuminations

Notwithstanding her calls to cease clinical “assault” on women’s bodies,⁶³ Kleegman’s mid-twentieth-century approach to recalibrating the pedagogy of sight that Sims and his colleagues established in gynecology years earlier traded relatively little in direct confrontation. In each of her eight, major medical publications, Kleegman makes clear her aim to curb the tradition of unwarranted and unconstrained surgical intervention in the emergent field of fertility science; but she does so without seeming to break completely from the pedagogical course set by gynecology’s founders, an approach facilitated in many ways by, for one, the fact that she was not communicating with Sims directly but rather with the ingrained traces of his discursive legacy some decades later and, for another, ongoing changes in visualization technologies, diagnostics, and treatment methods and possibilities that had transpired in the interim.⁶⁴ For her part, Kleegman goes so far as to cite Sims and others working from within his paradigm while—all the while—redirecting the discipline’s pedagogical gaze toward an alternative paradigm with different diagnostic understandings and perceptions of infertility.⁶⁵ In this way, her writings performed a complex yet persuasive balancing act wherein key cultural and professional norms related to efficacy and successful outcomes were upheld, but in light of a new scientific optics with the potential to reduce medical harms against members of vulnerable and historically under- and dis-served populations. In what follows, I highlight the modes by which Kleegman’s performance on this front facilitated a re-envisioned disciplinary trajectory via three clinical illuminations relating to a proxemics of pain; a re-scaling of time and efficiency; and an extension of corporeal boundaries and scientific expertise.

A proxemic of pain

When Kleegman began publishing scientific articles in 1934, those working in gynecology and the emergent field of fertility studies were being trained to visualize pain and other embodied (female) patient sensation only from a distance, if at all. These lessons were an outgrowth of a complex, constantly evolving cultural politics wherein pain and sensitivity were understood to be differential according to social hierarchies of sex, race, and class and, in an overarching sense, to be of relatively little import in the process of solving supposedly objective gynecological problems beyond that of a treatment’s social acceptability and publicity.⁶⁶ Kleegman’s technical writings intervened in this optics of distancing and minimization with a “rhetoric of proximity” that functioned to position patients’ pain at the center of her “conservative surgery” hermeneutic and well within fertility science’s field of vision. Rhetoricians Katy Rothfelder and Davi Thornton Johnson explain that a rhetoric of proximity includes “rhetorical acts that invite audiences to approach another person or persons, either the narrator or any character in a story, by attempting to move closer to that person.”⁶⁷ They are expressions not so much of close physical space or bodily arrangement necessarily (certainly Sims achieved physical proximity with patients) but of a trained, affective orientation targeting the lived

experiences of others, even and particularly those deemed non-normative. Such appeals are unique, Rothfelder and Thornton Johnson theorize, because they invite empathy while still acknowledging separations of embodiment that are inherent and ultimately insurmountable (the experience of others' pain is, after all, unknowable and therefore always contestable). Kleegman's writings make pain proximate in this sense by naming it, repeatedly and specifically, and teaching readers to recognize different expressions and gradations of patient pain as embodied experiences that, if interpreted closely and with an informed lens, invoke critical scientific and clinical insight.

Each of Kleegman's articles is inundated with references to specific pain manifestations and experiences, whether in terms of pain's presence via, for instance, "persistent painful swelling" and "recurring acute attacks,"⁶⁸ or its absence in, for example, instances of "painless, bright red bleeding late in pregnancy"⁶⁹ and the moments before shoulder pain inevitably occurs during a procedure.⁷⁰ Her writings are structured so that they seem to talk readers through her methods for seeing pain in her patients, whether via touch, instrumentation, or verbal engagement and ekphrasis. She highlights especially pain that has been inflicted on individuals under scientific and medical care, describing it as something that a woman has been "subjected to,"⁷¹ or "victim[ized]" or "assaulted" by,⁷² and explaining that pain's assessment in these cases sheds light as much on individual reproductive ills as on the ways in which fertility science has wrought errors in diagnosis and treatment. In this way, Kleegman conveys that righting the discipline's course will involve an ongoing dedication to seeing, interpreting, and on the whole appreciating the telling nuances of embodied pain.

Toward this end, Kleegman outlines a hermeneutic—which functions as a technical visualization technology⁷³—that is grounded in the diagnostic identification of pain and its indices in the gynecological patient's body. As her readers are brought into proximity with pain over the course of her articles, they are positioned to see that not all pain is alike and that—as experts—their job is to become fluent in its many appearances and responsive to pain in a sense that is nuanced and multidimensional. For instance, she explains in a 1934 *American Journal of Surgery* article that, counter to widespread medical practice at the time, "our policy is not to remove a cystic ovary. They [*sic*] cause pain because they are prolapsed. Proper suspension will cure the pain and also improve the circulation, often stopping further increase of the cystic degeneration."⁷⁴ Seeing and then following the pain to its source, she contends, reveals a more accurate representation of the problem at hand, as well as solutions that support long-term health and recovery. Although oophorectomy (i.e., ovary removal) might immediately eliminate some acute pain, she makes clear that the surgery in and of itself is extremely painful and risky, with repercussions lasting a lifetime. Therefore, in this scenario and others, she encourages her readers to resist the urge to cut out what—given a careful review of the pain at hand and the pain to come—would be best served by a more refined and less invasive intervention.

It should be noted, too, that Kleegman was not against gynecological surgery in scenarios where she found it warranted,⁷⁵ but she advocates in each of her medical publications for a complete account of the embodied experiences of the individual under consideration, and weighs that against the pain that surgery would certainly induce (considering even the emotional toll), before coming to a decision about diagnosis and treatment. Even then, she argues against standardized surgical interventions and commends

interventions that avoid excising entire swaths of the reproductive system. In a 1966 *Fertility and Sterility* article, for instance, Kleegman notes that the “ovary on the involved side usually does not need to be removed” in cases of even severe endometriosis or fibromyoma, and she highlights how resilient physiologically reproductive systems are when surgical interventions take only as much as is absolutely necessary.⁷⁶ In these circumstances, she explains, “it is surprising how well a greatly shortened tube regenerates itself, so that it grows to normal length after such conservative resection.”⁷⁷ Kleegman deciphered in pain a topology for guiding the field of fertility science not toward the elimination of surgical intervention or even toward something akin to de-medicalization but, rather, toward ever more humane and effective courses of diagnosis and treatment. Her pedagogy of sight retained the medical gaze that rhetoricians Amanda Friz and Marissa Fernholz demonstrate is in fact intertwined with the masculine gaze,⁷⁸ but it also shifted that gaze, incorporating a vision of embodied pain at close proximity and essentially operationalizing that vision as a dynamic and reliable disciplinary guide.

Moreover, at several key points in Kleegman’s publications she upholds the trained visualization of embodied pain as a guide also for identifying and effectively addressing cultural problems, which she articulates as central to the mission of the discipline. Whereas Sims’s pedagogy of distance ensured that gynecology separated itself from the structural harms that contributed to patients’ ills,⁷⁹ Kleegman’s rhetoric of proximity to pain served to highlight the relationship between fertility science and the society in which it functioned. In a 1935 article published in *The Journal-Lancet*, for instance, Kleegman writes in terms of the “picture” she has formed of the “unbelievable amount of misery and suffering” resulting from women’s lack of access to contraception,⁸⁰ which she links directly to problems ranging from infertility to maternal and infant mortality. Of those “who are doubtful as to the value of birth control education,”⁸¹ Kleegman wishes them into her line of sight, noting,

I would like to have them spend one day with me at the municipal hospital, in the clinic, at the operating table, and ward rounds. I would like to show them the misery, the physical and mental suffering, the preventable operations and the preventable deaths which are directly attributable to ignorance of this important phase of life—ignorance which is due to our indifference and negligence in not giving these poor and deserving mothers that health service which we have to give.⁸²

She identifies the “indifference” and “negligence” at the center of this problem as a result of faulty vision, one that skims over the lived realities of individuals’ misery and suffering and therefore fails to uphold effective interventions. In this description and across her medical publications as a whole, Kleegman elucidates how the identification of pain at levels both individual and structural, and the corresponding development of emergent pain literacies among disciplinary practitioners, supports an as-yet-unrealized precision in fertility-oriented treatment and care.

Scaling efficiency in longitudinal time

As Sims’s publications fueled the medicalization of gynecology in the mid-to-late 1800s, he enlisted the values that have more recently been identified as central to that process, including that of time management and efficiency.⁸³ To be sure, throughout his 1884 memoir, *The Story of My Life*, Sims highlights the speed at which he developed new

surgical instruments so that he could more quickly cure patients of gynecological ailments, reporting scrupulously throughout the carefully indexed manuscript on the number of minutes it took him to perform each intervention and the number of days it took each patient to recover.⁸⁴ Sims's scientific reports, too, are similarly aligned as they feature exacting descriptions of the timing of his experiments and operations and celebrate scenarios wherein desired results were achieved in the shortest periods of time.⁸⁵ In comparison, Kleegman's scientific publications do not reject this focus on or valuation of timing and efficiency, in no small part because—by the 1930s—conception was increasingly understood to be dependent on the careful timing and orchestration of diverse physiological variables;⁸⁶ but her writings do function to re-scale longitudinally what makes for successful timing and efficiency so that quick, rote interventions are illuminated as wasteful and counterproductive and therefore evidence of a substandard disciplinary trajectory. Efficiency in Kleegman's pedagogy of sight is characterized, in this respect, as something that can be seen only over time—rather than in a compressed, singular moment—and proof of its achievement can be found on the patient body that has not experienced “needless” intervention.⁸⁷

Rhetorician Christa Olson illustrates how pedagogies of sight that pivot on appeals to scale—such as magnitude—tend to function by espousing tensions inherent in diverse perspectives.⁸⁸ In Kleegman's articles, she shifts the evaluative scale of time from immediate to longitudinal by contemplating the former in light of the latter, thereby highlighting the differences between the two perspectives and deciphering the latter as more extensive and impactful and thus superior. In her 1936 *American Journal of Surgery* article, she identifies a number of frequently engaged interventions that—in an immediate sense—may seem to address a problem but—in a longitudinal sense—only exacerbate or otherwise complicate it. At one point, Kleegman writes,

Dilation and curettage is one of the most common procedures done, and the one least indicated. An internal os which will allow the passage of a uterine insufflation cannula and endometrial biopsy instrument requires no further dilation to facilitate the ascent of the sperm. Curetting a normal or hypoplastic endometrium is a harmful procedure, and may result in permanent sterility by the damage done.⁸⁹

The underlying contention she makes in this passage is that, to do nothing in these types of scenarios, at least until a thorough examination can be undertaken, is far more efficient than to intervene. While it will seem to take more time in the moment to investigate further into the issue at hand (as opposed to, by way of course, scraping away completely the lining and contents of the cervix), medical restraint offers the most expeditious path forward in the process of resolving reproductive problems.

That Kleegman is introducing a new, rescaled vision of evaluative, clinical time is especially evident in the case narratives that conclude several of her articles. Cooper Owens contends that case narratives surfaced as a generic expectation in gynecological writings in the mid-1800s and that they tended to feature wholly objectifying accounts of the patients discussed therein.⁹⁰ Kleegman's case narratives are notable not because they are communicated in ways that defy objectification, although they do engage objectifying rhetorical patterns less than do comparable others, but because they employ markers of time and timing to illustrate for readers how immediate, standardized (rather than careful, individualized) interventions should be seen as at-odds with

disciplinary efficiency. In one such narrative featured in her 1936 *American Journal of Surgery* research, Kleegman begins with a notation indicating substantial time gone by, identifying “Mr. and Mrs. F., [as] sterile nine and one-half years.”⁹¹ Over the course of the “past eight years,” she explains how Mrs. F. endured multiple invasive surgeries to gather biopsies and remove what were hypothesized as offending fibroids and cysts. Finally, at the end of those eight years, Kleegman reveals that Mr. F.’s semen was at last examined and found to be non-motile and lacking in key components. Once he was treated—a process that she describes in some detail, focusing all the while on the treatment’s short length—she reports: “the wife conceived about two weeks later.”⁹² This abrupt conclusion demands that readers confront the tension and immense disparity in treatment time associated with old ways of seeing versus new. Both the content and the structure of this passage makes clear that careful, initial restraint and technical deliberation proves more efficacious than does rapid yet uncalculated intervention. Indeed, in an even more exaggerated juxtaposition of old and new pedagogies of sight, Kleegman recalls in a 1954 *Fertility and Sterility* article how, “In over twenty years of marriage, this husband did not impregnate his wife. She conceived twice promptly with donor inseminations.”⁹³ The moral of these stories in a literal sense is that the female body is not always the appropriate and therefore most efficient focus of clinical intervention. The moral in a communicative sense is that Kleegman’s use of strategic comparison regarding the timing afforded by her line-of-sight versus that afforded by the field’s inherited line-of-sight substantiates the need for clinical change.

Toward this end, Kleegman augments her hermeneutic for envisioning diagnosis and treatment to include both manifestations of pain and, also, body parts and conditions that she argues have long been seen and thereby mis-read as abnormalities. For instance, she explains in publications from both 1936 and 1951 that a so-called tipped or retroverted uterus “does not cause, nor does it contribute to infertility,” and that much time—and embodied forbearance—has been lost on surgical efforts at uterine repositioning (Sims’s development of a “uterine elevator” comes to mind).⁹⁴ In the 1951 article, published in *Medical Clinics of North America*, she includes a sub-section dedicated solely to, “*What Not to Do*,” noting that there is no need for intervention in patients who have “vaginal hyperacidity” or distinct cervical positioning because such conditions are not pathological.⁹⁵ Kleegman characterizes as natural and unproblematic these variations, despite ingrained disciplinary and cultural norms upholding them as inherently suspect. Moreover, she guides disciplinary readers to envision such variations not as signs to operate but as invaluable opportunities for saving time and avoiding waste, whether that waste takes the form of cysts and ovaries “needlessly sacrificed” or expensive, painful tests employed to no possible use.⁹⁶ Her argument here is that doing nothing must be seen in many scenarios as the most efficient intercession. Given this conclusion, Kleegman uses her medical publications to frame the patient’s body as a place where rote surgical interventions create unreasonable inefficiencies that become only more glaringly apparent as time goes on.

The infertile body as boundary project

Across all of her writings and communications, technical or not, Kleegman identifies as the epitome of inefficiency those situations in which women are treated for reproductive

problems that have their cause in men. To protect against this and associated instances of “useless” experimentation and treatment,⁹⁷ Kleegman formulates her pedagogy of sight in ways that focus beyond the boundaries of the Sims-ian gynecology patient, ultimately incorporating into the fold semen, which she argues must become a disciplinary focal point in fertility science and medicine. Through this process, she rearticulates the infertile body in its role as a “boundary object” or “project.”⁹⁸ Haraway explains, “bodies as objects of knowledge are material-semiotic nodes. Their boundaries materialize in social interaction” because “objects do not pre-exist as such.”⁹⁹ In Sims’s medical publications, for instance, he maps and bounds his patients as object through the lens of the female body exclusively, testing semen only once it had entered and joined with elements of the female body, featuring illustrations of only the female body and its parts, and operating only on women in his studies of and treatment for reproductive ills.¹⁰⁰ When Kleegman began publishing in disciplinary journals, she pushed against and reprojected the boundaries that Sims had mapped out. More specifically, she harnessed the symbolicity and discursive malleability of the infertile body as object to present its outline under a broader scope, an endeavor that she wisely attempted only after establishing herself as a disciplinary insider because, as Haraway notes, “boundaries shift from within” and “siting (sighting) boundaries is a risky practice.”¹⁰¹

Kleegman’s bid to extend and re-bound the infertile body manifests especially clearly in her articles published in the *American Journal of Surgery* in 1936 and the *Women’s Medical Journal* in 1939. In both pieces, she features prominently the same full-sized, page-long illustrated figure displaying 50 different versions of spermatozoa under a microscope.¹⁰² Each individual drawing in the figure is labeled and linked with a corresponding hermeneutic description, beginning with the “normal spermatozoon” and extending through all manner of aberration including “microsperm,” “arrested development of tail,” “double head and body,” and “puff ball.”¹⁰³ The underlying argument that Kleegman makes with the pronounced inclusion of this figure is that, in the proper light, there are copious ways that sperm (rather than the much maligned—though in Kleegman’s framing far less expressive—cervix or uterus or ovary) must be seen as the probable source of reproductive problems. To visualize sperm in this way—that is, isolated and demarcated to highlight a variety of malformations—upholds the contention that surgery on women is something that should be done comparatively infrequently and conservatively. The figure offers a powerful warrant for Kleegman’s recurrent claim that “no surgery on the woman should be done for the relief of sterility, unless the husband’s sperms, when examined according to the new technique outlined, are within fertile limits.”¹⁰⁴

It is important to note that the figure and associated labels were—at the time of their publication in Kleegman’s articles—not new. This particular figure was first published in 1931 in the *American Journal of Obstetrics and Gynecology* by the gynecologist Gerald L. Moench and his research assistant Helen Holt,¹⁰⁵ but its placement in Kleegman’s articles in the context of her research on fertility writ large—as opposed to research on isolated aspects of reproduction—serves to assimilate sperm in particular into the broader disciplinary image of the infertile body. Unlike Moench and Holt, Kleegman integrates this illustration and its explication into accounts that also feature illustrations of (disembodied) cervixes and vaginas, as well as in-depth descriptions of, for instance,

the endometrium and the uterus. Thereby, readers are taught to envision sperm not as supplemental, as was the implication with existing representations, but as part and parcel of the infertile body as a whole, something that may require treatment in the same way that any other uterine or endometrial issue, for instance, might. Here and elsewhere, one can look to Kleegman's intricate categorization of individual sperm types, or her inclusion of objectifying images of not only sperm but also female body parts, to see that her aim was hardly to de-medicalize infertility. Instead, Kleegman sought to extend the gaze of medicalization to see further and incorporate more in this context, all with the intention of alleviating what she saw as an undue and even at times purposeless burden on women.

With this goal in mind, Kleegman set about delineating in her articles a careful program of study and expertise focused on spermatozoan analysis that she characterizes as absolutely vital to the future of the discipline. In her 1936 *American Journal of Surgery* article, she argues that, over the years, cursory consideration of sperm viability has been the source of great error, holding back considerably the study and treatment of infertility. She claims of her time working at New York University's College of Medicine, "We have repeatedly had the experience where, with our previous mode of examination, we considered the sperm specimen 'perfectly all right,' but with this additional study of the sperm morphology, we recognized the sperm as infertile."¹⁰⁶ The lack of trained focus on spermatozoa under the previous pedagogy of sight was, according to Kleegman, a disciplinary obstruction, though one that—thanks to modern equipment and modes of analysis—could be cleared readily if fertility scientists and practitioners dedicated themselves to developing appropriate expertise in this area. Toward that end, she curates in her 1951 *Medical Clinics of North America* article a detailed reading list for learning the "technics of detailed sperm analysis,"¹⁰⁷ and presents careful sketches of procedures for employing techniques along these lines, all the while characterizing as mandatory for fertility researchers and clinicians concentrated training in the optics of sperm motility, mobility, and morphology.

One indication that Kleegman's vision of the infertile body was communicated to readers as a concept for bridging, rather than rejecting entirely, established visions is that her appeals for extending medicalization to spermatozoa are featured in articles such as her 1951 *Medical Clinics of North America* piece, which is dedicated to the "diagnosis and treatment of infertility in women."¹⁰⁸ Likewise, when she published a textbook in 1966, she and her co-author included an extensive overview of spermatozoan analysis, even while titling the volume *Treating Infertility in Women*.¹⁰⁹ These sex-specific titles function to index the work of fertility study and treatment firmly within the Sims-ian pedagogy of sight, while Kleegman's inclusion of images and explications of sperm—particularly sperm that had not been removed from the female body following coitus—extends the boundaries of the field's vision without undue announcement and associated potential for backlash. That Kleegman was not only accepted into the fold of fertility science and medicine but ultimately recognized as a leader in the field certainly had much to do with her ability to merge perspectives over the course of her writings and, from there, articulate pedagogical infrastructures that lent themselves to different, arguably better and more ethical, practices and outcomes.

A sight for medical change

The second half of the twentieth century saw an at-first gradual but eventually substantial shift in the diagnostic trends of fertility scientists and practitioners and, correspondingly, in the effectiveness of the field's interventions. Less often were women's bodies upheld as the sole source of reproductive problems, their parts expendable and their pain lacking in diagnostic meaning or consequence. Today, statistics are regularly reported on the prevalence of "male-factor" infertility specifically, and this practice can most definitely be traced back to Kleegman and her consistent tracking and reporting on "male sources" of infertility in U.S. medical journals beginning in the 1930s.¹¹⁰ What can also be traced back to Kleegman is that—statistically—rote, unnecessary surgeries on women's ovaries, fallopian tubes, and cervixes were increasingly reconsidered and prevented in light of detailed spermatozoan analysis and associated treatment for men. Moreover, theories of differential sex-, race-, and class-oriented pain were at least explicitly (though by no means categorically) employed less often to justify medical violence and discrimination, in part, I would argue, because emerging scientists and health-care practitioners were for the first time being guided pedagogically to see, interpret, and communicate about patients' unique, situated, and embodied pain. Whereas medicine went decidedly "wrong" at the hands of Sims and those who followed in his wake, perpetuating horrific racial and misogynistic brutality,¹¹¹ some aspects of that medical trajectory began to change a century later around the time that Kleegman's medical publications found a disciplinary audience. This is not to say that, at that point, fertility medicine rid itself of the ingrained practices of misogyny and racism from which it sprang. In fact, there remains irrefutable evidence that racialized (notably, in the United States, Black, Indigenous, Latinx, and/or Hispanic) women are all-too-often misdiagnosed, mistreated, ignored, and even killed in their dealings with fertility medicine and the reproductive sciences more broadly.¹¹² As rhetorician Natalie Fixmer-Oraiz explains, racialized women are "vested in the differential regulation, protection, and proliferation of domestic bodies" resulting from contemporary logics of "homeland maternity" wherein white, middle-to-upper-class, heterosexual reproduction is heralded and safeguarded above all else.¹¹³ To say the least, the path forward for the discipline on this front will require significant changes at levels ranging from that of technical publications and pedagogy to that of residency training and professional oversight. If there is any encouraging news to be garnered from this grim picture, it is that—as the present analysis illustrates—fertility medicine has shown itself capable in the past of being steered in new directions. This is a capacity that those both within the discipline, such as Kleegman, and those who are not disciplinary insiders—and therefore not (as) bound by the assumptions and dictates of medical rhetoric and medicalization—must continue to tap into to support all those in need of care and to create the conditions vital for increasingly humane, ethical intervention and treatment.¹¹⁴

Although no single factor can be upheld as wholly responsible for the mid-twentieth-century disciplinary shift considered in this analysis, the pedagogical infrastructure that Kleegman established in her medical publications from 1934 to 1966 certainly worked to help create its necessary conditions. Through her technical writings, Kleegman guided others training and working in this specialty to visualize fertility science and medicine through a recalibrated lens. With little fanfare or disciplinary confrontation, she

shifted ingrained, diagnostic heuristics grounded in tenets of abstraction, vilification, and myopia toward novel ones, illuminating the value in clinical judgement that attends to—first—women’s embodied pain as a diagnostic opportunity facilitated by proximity. Kleegman suggests throughout her medical publications that the clinical decision to study and even dwell on instances of women’s pain is also a decision to gain insight into the reproductive issue at hand, as well as into ongoing disciplinary flaws and even larger societal problems related to inequalities of sex, race, and class. To that end, she fosters in readers a range of literacies and aptitudes for assessing patient pain and thereby better matching interventions to the alleviation of harms as they come to exist in distinct modalities and registers. It is also true that Kleegman’s efforts to take women’s testimony into account in the process of scientific and medical examination, of listening to women, makes her part of a broader U.S. history including, for instance, Dr. Mary Putnam Jacobi’s use of interviews with women in the 1870s to uphold menstruation as a sign of health,¹¹⁵ and the use of speak-outs and other public testimony as impetus for the woman’s health movement of the 1960s and 1970s.¹¹⁶ Future research into the different modes and engagements that women’s testimony has taken in furthering this history is warranted and would go a long way toward articulating the links between professional trajectories of science and medicine, and ethical changes in medical care. To that point, communication scholars Amber Johnson and Kesha Morant Williams demonstrate that medical practice works against all women’s health promotion, but perhaps especially racialized women’s health promotion, when their own testimony is routinely discounted as clinically invaluable.¹¹⁷

Second and beyond her framing of pain as clinically proximate, Kleegman’s publications illuminate the value to clinical judgement in a re-scaled assessment of medical time and efficiency, with patient bodies that had not been thoughtlessly intervened upon functioning as a sign of shrewd, medical restraint and providing evidence of having taken the most expeditious route to infertility treatment and longitudinal reproductive health. Her calls to look beyond immediate intervention to consider women’s future, as well as their pasts and potential preventative indications, flew in the face of Sims’s model of constant surgical churn, though it did so in a way that did not announce itself as such. Third, Kleegman’s publications illuminate also the clinical value in seeing beyond the bounds of the female reproductive system to diagnose and treat fertility ills in spermatozoa, which she goes to great lengths to reveal as potentially engendering any number of damaging aberrations that require trained sight and expertise to diagnose. In this way especially, Kleegman reveals herself to be a disciplinary insider, albeit—as a woman and an immigrant—a decisively non-normative one. The changes Kleegman sought to enact in fertility science she did from within the scope of medicalization, extending that view to encompass more rather than less and shifting that lens in ways that on the whole supported what had come before. In assessing Kleegman’s medical research, there can be no doubt that the view of reproduction and fertility that she furthered drew from a very different “ideological or epistemic program” than did that represented by Sims,¹¹⁸ though her ability to avoid divorcing entirely from Sims’s perspective is most assuredly what enabled her to steer the discipline in a new direction without either curtailing it or being rejected from it.

What this case study reveals about medical pedagogies of sight in particular is that, in this context, a persuasive balance is achieved less by dependence on just the right

illustration or descriptive appeal and more by the careful, complex mechanisms through which old ways of seeing are negotiated with newer ones. In Kleegman's situation, she employed tenets of time management and efficiency, which are inherent to medicalization and were central to Sims's visualization of gynecological health, to introduce her alternative hermeneutic. She also did not denounce norms of objectification or address underlying medical assumptions concerning, for instance, the supposedly inherent pathology of married, childless women. In this way and others, Kleegman's was not a pedagogy that cut itself off from disciplinary expectations but, rather, one that worked to build from those expectations in ways that supported subsequent internal transformation via the visual training and correspondingly evolved practices of upcoming scientists and medical experts. Change in any context—but perhaps necessarily in a medical one—is an elusive, complicated process that depends, according to Haraway, on “revisoning the [scientific] world as a coding trickster.”¹¹⁹ Especially in retrospect, Kleegman's medical publications seem to be the product of just such a trickster, her talents evidenced because the medical changes she envisioned and helped to facilitate unfolded so smoothly.

Notes

1. Sophia J. Kleegman, “Sterility,” *American Journal of Surgery* 33, no. 3 (September 1936): 403. [https://doi.org/10.1016/S0378-4320\(36\)90006-4](https://doi.org/10.1016/S0378-4320(36)90006-4).
2. Sophia J. Kleegman, “Therapeutic Donor Insemination,” *Fertility & Sterility* 5, no. 1 (1954): 14. [https://doi.org/10.1016/S0015-0282\(16\)31504-7](https://doi.org/10.1016/S0015-0282(16)31504-7).
3. Sophia J. Kleegman, “Surgery of the Ovary,” *American Journal of Surgery* 23, no. 3 (March 1934): 419. [https://doi.org/10.1016/S0002-9610\(34\)90618-8](https://doi.org/10.1016/S0002-9610(34)90618-8); Susan Wells, *Out of the Dead House: Nineteenth-Century Women Physicians and the Writing of Medicine* (Madison: University of Wisconsin Press, 2001), 28.
4. Deirdre Cooper Owens, *Medical Bondage: Race, Gender, and the Origins of American Gynecology* (Athens: University of Georgia Press, 2017), 5.
5. Owens, *Medical Bondage*, 1.
6. On descriptions of enslaved, Black women as “breeders” or as “breeding,” and nineteenth-century appeals to limit the reproduction of poor, Irish immigrants, see Cooper Owens, *Medical Bondage*, 19–20, 98.
7. Judith M. Roy, “Surgical Gynecology,” in *Women, Health, and Medicine in America*, ed. Rima D. Apple (New York: Routledge, 1990), 174.
8. It was not until the 1870s that “woman's doctors”—who were understood to be distinct from obstetricians in that their primary mode of intervention was surgery—came to be called “gynecologists.” Roy, “Surgical Gynecology,” 174.
9. Over the course of her career, Kleegman published nine scientific articles. These serve as artifacts for the analysis at hand. Three were published in the *American Journal of Surgery*, two in *Fertility & Sterility*, and one each in *The Lancet*, *Medical Clinics of North America*, and *Medical Women's Journal*, respectively.
10. Margaret Army and John R. Quagliarello, “History of Artificial Insemination: A Tribute to Sophia Kleegman, M.D.,” *Seminars in Reproductive Endocrinology* 5, no. 1 (February, 1987): 1–3. <https://doi.org/10.1055/s-2007-1021847>.
11. Kleegman, “Surgery of the Ovary,” 423.
12. On the role of the scientific journal article in general as a primary knowledge-production site, see Alan G. Gross, Joseph E. Harmon, and Michael S. Reidy, *Communicating Science: The Scientific Article from the 17th Century to the Present* (New York: Oxford University Press, 2002), vii. For a discussion of the role that scientific journals played in the

- development of modern gynecological medicine and pedagogy specifically, see Cooper Owens, *Medical Bondage*, 78, 84, 101; and Adele E. Clarke, "Reproductive Science, 1913–1971," in *Centennial History of the Carnegie Institution of Washington*, Vol. 5, eds. Jane Maienschein, Marie Glitz, and Garland E. Allen (New York: Cambridge University Press, 2004), 83–116.
13. NYU School of Medicine, "Sophia Kleegman '24," *Grapevine: The Alumni Magazine*, Fall 2018, 40. See also, Barbara Sicherman and Ilene Kantrov, "Kleegman, Sophia Josephine," in *Notable American Women: The Modern Period*, ed. Barbara Sicherman and Ilene Kantrov (Cambridge, MA: Harvard University Press, 1980), 398–400.
14. Jordynn Jack, "A Pedagogy of Sight: Microscopic Vision in Robert Hooke's *Micrographia*," *Quarterly Journal of Speech* 95, no. 2 (2009): 193. <https://doi.org/10.1080/00335630902842079>.
15. Rhetorician T. Kenny Fountain articulates "trained vision" in the context of medical education specifically as a way of "being in the world that shape[s] lived experience" and is the foundation of technical expertise. Such vision involves the "organization of perception through the interplay of multimodal displays and objects, interpretative frameworks, and the situated activities that create and deploy them;" *Rhetoric in the Flesh: Trained Vision, Technical Expertise, and the Gross Anatomy Lab* (New York: Routledge, 2014), 5.
16. Miriam Solomon, *Making Medical Knowledge* (New York: Oxford University Press, 2015), 12.
17. Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14, no. 3 (Autumn, 1988): 580. <https://doi.org/10.2307/3178066>.
18. Haraway, "Situated Knowledges," 594, 589.
19. Haraway, "Situated Knowledges," 585.
20. Ibid.
21. Londa Schiebinger, *Nature's Body: Gender in the Making of Modern Science* (Boston: Beacon Press, 1993), 160.
22. Robin E. Jensen, *Infertility: Tracing the History of a Transformative Term* (University Park: The Pennsylvania State University Press, 2016), 38–70; Rachel Malane, *Sex in Mind: The Gendered Brain in Nineteenth-Century Literature and Mental Sciences* (New York: Peter Lang, 2005), 37–38.
23. Dorothy Roberts, *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty* (New York: Pantheon Books, 1997); and Owens, *Medical Bondage*.
24. Martin Pernick, *A Calculus of Suffering* (New York: Columbia University Press, 1985); Roy, "Surgical Gynecology," 185.
25. Marie Jenkins Schwartz, *Birthing a Slave: Motherhood and Medicine in the Antebellum South* (Cambridge, MA: Harvard University Press, 2006).
26. Owens, *Medical Bondage*, 118–119.
27. James H. Cassedy, *Medicine in America: A Short History* (Baltimore, MD: Johns Hopkins University Press, 1991), 67.
28. Deborah Kuhn McGregor, *From Midwives to Medicine: The Birth of American Gynecology* (New Brunswick, NJ: Rutgers University Press, 1998), 6.
29. Roy, "Surgical Gynecology," 174.
30. See, Harriet A. Washington, *Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present* (New York: Doubleday, 2006), 67–70.
31. Mary Poovey, "'Scenes of an Indelicate Character': The Medical 'Treatment' of Victorian Women," *Representations* 14, no. 2 (1986): 139. <https://doi.org/10.2307/2928438>. On the lack of knowledge and training available to early gynecologists, see also Roy, "Surgical Gynecology," 179; McGregor, *From Midwives to Medicine*, 19–21.
32. Washington, *Medical Apartheid*, 65.
33. Washington, *Medical Apartheid*, 64.
34. McGregor, *From Midwives to Medicine*, 54.
35. McGregor, *From Midwives to Medicine*, 67.

36. Rachel Dudley, "The Role of Feminist Health Humanities Scholarship and Black Women's Artistry in Re-shaping the Origin Narrative of Modern, U.S. Gynecology," *Humanities* 10, no. 1 (2021): 58, accessed June 1, 2021, <https://doi.org/10.3390/h10010058>. See also, Owens, *Medical Bondage*, 1–2.
37. Pernick, *A Calculus of Suffering*, 7.
38. Pernick, *A Calculus of Suffering*, 3–7, 156–157; McGregor, *From Midwives to Medicine*, 50.
39. Owens, *Medical Bondage*, 55. On the framing of early surgeons and surgical procedures as "heroic," see Pernick, *A Calculus of Suffering*, 30. Sims's research on ovariectomies and the "uterine elevator" include: "Ovariectomy: Pedicle Secured by Silver Wire after the Failure of the Actual Cautey to Arrest the Haemorrhage," *British Medical Journal* 1, no. 316 (1867): 50–51. <https://doi.org/10.1136/bmj.1.316.50>; "A New Uterine Elevator," *American Journal of the Medical Sciences* 35 (1858): 132–134. <https://doi.org/10.1097/00000441-185801000-00011>.
40. See, for example, Luce Irigaray, *Speculum of the Other Woman*, trans. Gillian C. Gill (Ithaca, NY: Cornell University Press, 1985).
41. Nicole Ivy, "Bodies of work: A meditation on medical imaginaries and enslaved women," *Souls* 18, no. 1 (2016): 11. <https://doi.org/10.1080/10999949.2016.1162590>. Following Sims's 1852 publication on his vesico-vaginal fistula surgery, publications on similar interventionist, gynecological surgeries increased by over 100 percent: Owens, *Medical Bondage*, 55. In his memoir, Sims recalls inviting many other doctors and interested parties to "witness the experiments" he did on the enslaved women in his care, as well as on a range of other female patients over the course of his career: *The Story of My Life* (New York: D. Appleton and Company, 1888), 210–222.
42. Owens, *Medical Bondage*, 11. Overall, Sims published five central, scientific articles on issues related to reproductive health. These serve as artifacts for the analysis at hand with three published in the *British Medical Journal*, one in the *Chicago Medical Examiner*, and one in *The Lancet*.
43. J. Marion Sims, "On the Treatment of Vesico-Vaginal Fistula," *American Journal of the Medical Sciences* 45, no. 25 (1852): 60. <https://doi.org/10.1007/BF01901610>.
44. Ibid. See also, for example, J. Marion Sims, "Remarks on Battey's Operation," *British Medical Journal* 2, no. 887 (1877): 916–918. <https://doi.org/10.1136/bmj.2.885.840>. Therein he discusses "cases" extensively, including those "lost" in surgery or not improved by surgical intervention at all (916).
45. Sims, "On the Treatment of Vesico-Vaginal Fistula," 82.
46. Sims, "On the Treatment of Vesico-Vaginal Fistula," 59.
47. Ibid.
48. Ibid. [emphasis added].
49. Sara Ahmed, *The Cultural Politics of Emotion* (New York: Routledge, 2004).
50. John A. Lynch, *The Origins of Bioethics: Remember When Medicine Went Wrong* (East Lansing: Michigan State University Press), 8–9.
51. For evidence of the "horror and fear of women's bodies" that was communicated in late-nineteenth-century U.S. medical rhetoric, see Wells, *Out of the Dead House*, 25–26.
52. J. Marion Sims, "Illustrations of the Value of the Microscope in the Treatment of the Sterile Condition," *British Medical Journal* 2, no. 409 (1868): 465–466. <https://doi.org/10.1136/bmj.2.410.492>.
53. Ibid.
54. Ibid.
55. Sims, "Illustrations of the Value of the Microscope," 466.
56. For a history of the monstrous-maternal trope within the medical sciences, see Rosi Braidotti, "Signs of Wonder and Traces of Doubt: On Teratology and Embodied Differences," in *Between Monsters, Goddesses and Cyborgs: Feminist Confrontations with Science, Medicine and Cyberspace*, ed. Nina Lykke and Rosi Braidotti (London: Zed Books, 1996), 135–152.
57. Martha Solomon, "The Rhetoric of Dehumanization: An analysis of Medical Reports of the Tuskegee Syphilis Project," *Western Journal of Speech Communication* 49, no. 4 (1985): 241. <https://doi.org/10.1080/10570318509374200>.

58. Sims, "On the Treatment of Vesico-Vaginal Fistula," 68.
59. Sims, "On the Treatment of Vesico-Vaginal Fistula," 79.
60. Cooper Owens offers significant evidence that Sims and other gynecologists following his lead second-guessed their female patients' accounts of pain and held patients down during agonizing surgeries: *Medical Bondage*, 46, 58, 104, 112.
61. See Roy, "Surgical Gynecology," 185–186.
62. In the cases of his Black and Irish-immigrant patients in particular, Sims collected neither patient histories before treatment nor follow-up information after patients left his care (McGregor, *From Midwives to Medicine*, 66).
63. Kleegman, "Sterility," 403.
64. For an overview of some of the major changes that transpired in the reproductive sciences in terms of technology, diagnosis, and medical treatment beginning in the early twentieth century, see Clarke, "Reproductive Science, 1913–1971," 83–116. See also, Margaret Marsh and Wanda Ronner, *The Fertility Doctor: John Rock and the Reproductive Revolution* (Baltimore, MD: The Johns Hopkins University Press, 2008).
65. Kleegman cites Sims directly and without criticism several times, thereby demonstrating that her work builds from his trajectory while, all the while, redirecting that trajectory in impactful ways. See, for instance, Sophia J. Kleegman, "Infertility in Women," in *Gynecology*, Vol. 1, ed. R. J. Lowrie (Springfield, IL: Charles C. Thomas Publisher, 1952), 629; and Sophia J. Kleegman and Sherwin A. Kaufman, *Infertility in Women: Diagnosis and Treatment* (Philadelphia, PA: F.A. Davis Company, 1966), 80, 90.
66. Pernick, *A Calculus of Suffering*, 148–167. See also, Kristin K. Barker, "A Ship Upon a Stormy Sea: The Medicalization of Pregnancy," *Social Science and Medicine* 47, no. 8 (1998): 1067–1076. [https://doi.org/10.1016/S0277-9536\(98\)00155-5](https://doi.org/10.1016/S0277-9536(98)00155-5).
67. Katy Rothfelder and Davi Johnson Thornton, "Man Interrupted: Mental Illness Narrative as a Rhetoric of Proximity," *Rhetoric Society Quarterly* 47, no. 4, (2017): 363. <https://doi.org/10.1080/02773945.2017.1279343>. See also, Dennis A. Lynch, "Rhetorics of Proximity: Empathy in Temple Grandin and Cornel West," *Rhetoric Society Quarterly* 28, no. 1 (1998): 5–23. <https://doi.org/10.1080/02773949809391110>.
68. Kleegman, "Surgery of the Ovary," 419.
69. Sophia J. Kleegman, "Office Treatment of the Pathologic Cervix," *American Journal of Surgery* 48, no. 1 (1940): 298. [https://doi.org/10.1016/S0002-9610\(40\)90261-6](https://doi.org/10.1016/S0002-9610(40)90261-6).
70. Sophia J. Kleegman, "Diagnosis and Treatment of Infertility in Women," *Medical Clinics of North America* 35 (1951): 827. [https://doi.org/10.1016/S0025-7125\(16\)35282-8](https://doi.org/10.1016/S0025-7125(16)35282-8).
71. Kleegman, "Surgery of the Ovary," 421; "Therapeutic Donor Insemination," 14.
72. Kleegman, "Diagnosis and Treatment of Infertility in Women," 817; Sophia J. Kleegman, "Recent Advances in the Diagnosis and Treatment of Sterility," *Medical Woman's Journal* 46, no. 1 (1939): 8; Kleegman, "Sterility," 403.
73. Haraway, "Situated Knowledges," 594.
74. Kleegman, "Surgery of the Ovary," 423.
75. In this way, Kleegman distinguished herself and her "conservative surgery" hermeneutic from the tradition of late-nineteenth-century "conservative" gynecological practitioners—many of whom were women such as Dr. Elizabeth Blackwell—who renounced completely gynecological surgery, largely in service to maternalist and eugenic beliefs about the delicate and sacred nature of the Anglo-Saxon female reproductive system. See, Regina Morantz-Sanchez, *Conduct Unbecoming a Woman: Medicine on Trail in Turn-of-the-Century Brooklyn* (New York: Oxford University Press, 2000), 107–108; Elizabeth Blackwell, *The Influence of Women in the Profession of Medicine* (London: George Bell and Sons, 1889).
76. Sophia J. Kleegman, "Preventive Aspects of Infertility," *Fertility and Sterility* 17, no. 6 (1966): 775. [https://doi.org/10.1016/S0015-0282\(16\)36127-1](https://doi.org/10.1016/S0015-0282(16)36127-1).
77. Ibid.
78. Amanda M. Friz and Marissa L. Fernholz, "The Male Gaze in the Medical Classroom: Proximity, Objectivity, and Objectification in 'The Pornographic Anatomy Book,'" *Women's*

- Studies in Communication* 43, no. 3 (2020): 292–316. <https://doi.org/10.1080/07491409.2020.1740899>.
79. See McGregor, *From Midwives to Medicine*, 68.
 80. Sophia J. Kleegman, “Medical and Social Aspects of Birth Control,” *Journal-Lancet* 55, no. 22 (1935): 731.
 81. Kleegman, “Medical and Social Aspects of Birth Control,” 730.
 82. Kleegman, “Medical and Social Aspects of Birth Control,” 730.
 83. Peter Conrad, *The Medicalization of Society: On the Transformation of Human Conditions into Treatable Disorders* (Baltimore: Johns Hopkins University Press, 2007).
 84. Sims, *The Story of My Life*.
 85. See, for instance, Sims, “On the Treatment of Vesico-Vaginal Fistula,” 59–81; “Illustrations of the Value of the Microscope,” 465–466.
 86. Jensen, *Infertility*.
 87. Kleegman, “Sterility,” 393.
 88. Christa J. Olson, “American Magnitude: Frederic Church, Hiram Bingham, and Hemispheric Vision,” *Rhetoric Society Quarterly* 48, no. 4 (2018): 380–397. <https://www.tandfonline.com/doi/abs/10.1080/02773945.2017.1347952>.
 89. Kleegman, “Sterility,” 403.
 90. Cooper Owens, *Medical Bondage*, 8.
 91. Kleegman, “Sterility,” 404.
 92. *Ibid.*
 93. Kleegman, “Therapeutic Donor Insemination,” 17.
 94. Kleegman, “Diagnosis and Treatment of Infertility in Women,” 821. See also, Kleegman, “Sterility,” 403. Surgeries to reposition the uterus were among the most common early, gynecological interventions: Roy, “Surgical Gynecology,” 191. Sims, “A New Uterine Elevator,” 132–134.
 95. Kleegman, “Diagnosis and Treatment of Infertility in Women,” 823–824 [emphasis in original].
 96. Kleegman, “Preventive Aspects of Infertility,” 775.
 97. Kleegman, “Recent Advances,” 9; “Therapeutic Donor Insemination,” 14.
 98. Haraway, “Situated Knowledges,” 595.
 99. *Ibid.* [emphasis in original].
 100. Sims notes that he is “in the habit of examining the vaginal and cervical mucus for spermatozoa some hours after coition,” which does not necessarily imply that he never tested sperm in isolation but nevertheless provides convincing evidence that, at least in terms of his scientific and clinical practices, he consistently bound the (in)fertile body exclusively within the female body; “Illustrations of the Value of the Microscope,” p. 465.
 101. Haraway, “Situated Knowledges,” 595.
 102. Kleegman, “Sterility,” p. 396; “Recent Advances,” 2.
 103. Kleegman, “Sterility,” p. 396.
 104. Kleegman, “Sterility,” 403.
 105. Gerald L. Moench and Helen Holt, “Sperm Morphology in Relation to Fertility,” *American Journal of Obstetrics and Gynecology* 22, no. 2 (1931): 199–210. [https://doi.org/10.1016/S0002-9378\(31\)90545-0](https://doi.org/10.1016/S0002-9378(31)90545-0).
 106. Kleegman, “Sterility,” 395.
 107. Kleegman, “Diagnosis and Treatment of Infertility in Women,” 821.
 108. Kleegman, “Diagnosis and Treatment of Infertility in Women,” 817–846.
 109. Kleegman and Kaufman, *Infertility in Women*.
 110. See, for instance, Kleegman, “Sterility,” 405; “Recent Advances in the Diagnosis and Treatment of Sterility,” 9. Historians Margaret Marsh and Wanda Ronner identify Kleegman as one of “several prominent women physicians” who studied and began reporting on male-factor infertility in the 1930s, but they footnote only Dr. Margaret C. Sturgis in addition to Kleegman, and Sturgis’s published research focused not on infertility but on uterine cancer. They also note that, while Dr. Samuel Meaker spoke to the issue of male sources

- of infertility in the 1930s, he reported that it was responsible for infertility in only very rare instances: *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore: The Johns Hopkins University Press, 1996), 155; 160–161.
111. Lynch, *The Origins of Bioethics*, xiv, 56.
 112. See, for instance, Leandra Hinojosa Hernández and Sarah de los Santos Upton, *Challenging Reproductive Control and Gendered Violence in the Américas: Intersectionality, Power, and Struggles for Rights* (Lanham, MD: Lexington Books, 2018); Rachel Bloom-Pojar and Maria Barker, “The Role of Confianza in Community-Engaged Work for Reproductive Justice,” *Reflections* 20, no. 2 (2020): 84–101; Washington, *Medical Apartheid*.
 113. Natalie Fixmer-Oraiz, *Homeland Maternity: US Security Culture and the New Reproductive Regime* (Urbana: University of Illinois Press, 2019), 139.
 114. For an excellent explication of a specific intervention that represents the possibility for increasingly humane, ethical treatment in gynecology and fertility science, see Berkley Conner, “Mapping Redesign: Gynecological Neoliberalism and the Spatiality of Project Yona’s Speculum,” *Women’s Studies in Communication*, 44, no. 4 (2021): 611–631. <https://doi.org/10.1080/07491409.2021.1925797>.
 115. See Wells, *Out of the Dead House*, 174–178.
 116. See Tasha N. Dubriwny, “Consciousness-Raising as Collective Rhetoric: The Articulation of Experience in the Redstockings’ Abortion Speak-Out of 1969,” *Quarterly Journal of Speech* 91, no. 4 (2005): 395–422. <https://doi.org/10.1080/00335630500488275>; and Matthew J. Sobnosky, “Experience, Testimony, and the Women’s Health Movement,” *Women’s Studies in Communication* 36, no. 3 (2013): 217–242. <https://doi.org/10.1080/07491409.2013.835667>.
 117. Amber Johnson and Kesha Morant Williams, “‘The Most Dangerous Place for an African American is in the Womb’: Reproductive Health Disparities and Anti-Abortion Rhetoric,” *Journal of Contemporary Rhetoric* 5, no. 3–4 (2015): 145–159.
 118. Jack, “A Pedagogy of Sight,” 192.
 119. Haraway, “Situated Knowledges,” 596.

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Notes on contributor

Robin E. Jensen (Ph.D., University of Illinois at Urbana-Champaign) is a Professor of Communication at the University of Utah who studies historical and contemporary discourses about health, science, sex, and gender.

ORCID

Robin E. Jensen  <http://orcid.org/0000-0002-0216-3589>