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From Barren to Sterile: The Evolution of a Mixed Metaphor

Robin E. Jensen

Recent scholarship has called for the study of mixed metaphors wherein two or more phrases (i.e., vehicles) are enlisted to describe a single underlying idea (i.e., tenor). In this essay, I delineate the rhetorical predecessors of (in)fertility, a term that constitutes both a metaphor in and of itself and a tenor that has been explained in terms of mixed metaphorical discourses of the past. Through an initial analysis of the evolution of reproductive metaphors in texts spanning the mid-seventeenth to the mid-nineteenth centuries, and then a follow-up analysis of those metaphors as they mixed together in early twentieth-century discourses, I illustrate how the interaction of a mixed metaphor's distinct vehicles is dependent on those metaphors' historical uses. My findings are considered in terms of their implications for positioning individual women—both in the past and more recently—as more or less at-fault for their lack of children.

Metaphors are figures of speech in which a word or phrase (i.e., the vehicle) is used to communicate an “underlying idea or principal subject” (i.e., the tenor) to which it does not literally apply (Richards 96–97; Lakoff and Johnson 5). Although it has long been recognized that the interaction between vehicle and tenor creates a meaning or perspective distinct from that of the original terms (Black 286–287; Osborn and Ehninger 226), only relatively recently have scholars begun theorizing about situations in which two or more different vehicles are used to reference the same tenor. For instance, early twentieth-century medical experts routinely described married women without children as both “fruitless” and “in need of repair,” “barren,” and “broken,” thereby framing women’s inability to bear children through the conflicting lenses of the natural, organic world and the world of machines (e.g., Clarke; Hall). Leah Ceccarelli contends that these “mixed metaphors”—which ignite the “blending of concepts” through “the interaction between metaphorical vehicles”—are both common and often employed when the tenor in question is technical, scientific, and/or obtuse (“Rhetoric” 3; “Neither Confusing” 92). For example, since

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its inception genetic science has been discussed via a range of diverse, sometimes conflicting, mixed metaphors, specific combinations of which scholars have analyzed for their potential to obfuscate or clarify the complex relationship between genes and human health (Ceccarelli, “Rhetoric” 5–6; “Neither Confusing” 97–103; Condit 108–109, 161–168). In her work, Ceccarelli both engages this particular conversation about genetic metaphors and calls more broadly for an extension of this line of inquiry through continued analysis of the interaction between distinct vehicles employed in prominent mixed metaphors (“Rhetoric” 8).

In this essay, I respond to Ceccarelli’s call and argue that the interaction of a mixed metaphor’s distinct vehicles is dependent in some key ways upon those metaphors’ historical uses. Indeed, Richard Rorty argues that metaphors for individual tenors shift and change over time, moving into the realm of the literal and the metaphorically “dead” (or what Emily Martin theorizes as “sleeping” [501]) when they become commonplace and/or when they no longer meet the communicative needs of a community (Rorty 16). As metaphorical vehicles for a given tenor shift, they not only offer competing perspectives but they also, in some cases, coalesce and form entirely unique mixed metaphors composed of metaphors-of-old. In this respect, understanding mixed metaphors depends upon the rhetorical delineation of individual vehicles’ historical and ongoing uses, as well as the conditions of those vehicles’ evolution and combination. This essay considers “(in)fertility” (as it is employed in the context of women’s reproductive health) by way of illustration, a term that constitutes both a metaphor in and of itself and a tenor that has been explained in terms of mixed metaphorical discourses of the past (e.g., reproductive bodies as fruit-bearing *and* as mechanical). Thus, discourses about (in)fertility offer an excellent opportunity for the study of how distinct, historically situated vehicles interact within and cluster around a technical yet pervasive mixed metaphor.

It was not until 1868 that the obstetrician James Matthews Duncan first used the word “fertile” to reference women who gave birth (or had the potential to give birth) to numerous children. According to Duncan, the more children a woman was capable of having, the more “fertile” or “fecund” she was (3).¹ By the end of the twentieth century, Duncan’s metaphor had moved into the realm of the literal as physicians, scientists, and lay persons alike routinely enlisted the term “fertile” to describe women with many offspring (or the potential for many offspring), just as they employed “infertile” to describe married women who remained childless (or who bore few children). Today, the term “fertility” endures as the most common

¹Duncan defined “fertility” as “productivity” or “the amount of births” a woman has (an actuality) and “fecundity” as her “capability to bear” children (a potentiality) (3). The latter term would come to be used almost exclusively in the realm of official medical discourses, whereas “fertility” would be taken up more broadly in mainstream and vernacular discourses delineating both a woman’s potential to bear children and the actual number of births and/or children that she had. Many of these discourses accounted for the health of the infants born to a woman as a telling indicator of her overall fertility. That is, a woman who bore many children who were sickly or died after birth would not be deemed as “fertile” as a woman who bore many children who were healthy and survived into adulthood.

denotation for women's reproductive capacity. Even scholars who explore delineations of women's reproductive ability among people in non-English-speaking regions across India, Africa, and the Middle East deem "(in)fertility" the most fitting translation for the ideas communicated therein (Demircioğlu 51–67; Neff 475–485; Upton 349–362).

The enduring, widespread nature of Duncan's metaphor raises questions about its emergence, as well as the terms that directly preceded and clustered around it. Extensive discourse about women's reproductive problems and capabilities can be traced back as far as the writings of ancient Egyptians, Hebrews, and pre-Hippocratic Greeks (Morice et al. 497–499). Over the last few centuries, the terms "barren" and then "sterile" have functioned as metaphorical predecessors to "infertile," serving—at certain historical moments—as common denotations for women's inability to become pregnant or bear healthy children. On the whole, this essay is dedicated to contextualizing contemporary discourse about infertility by examining preceding shifts in reproductive metaphors for infertility. Throughout the analysis, I explore the facilitating role that these metaphors played in positioning individual women as more or less responsible for their lack of children, particularly as specific metaphorical vehicles evolved over time and eventually came to mix together. Nineteenth-century discourse referred to "sterile" female bodies as machines in need of repair by a surgeon and, in this way, constituted women as outside the realm of culpability for their childlessness. These discourses, in contrast to earlier discourses that referred to women as "barren" and therefore unbalanced, unnatural, and/or not right with God, offered them few opportunities for self-help but much in the way of surgical hope (despite the bleak success rates of surgical interventions at the time). Sterile bodies could be fixed by medical intervention, but barren bodies were a sign of one's moral failings and required individual women to behave in prescribed ways and pray for God's blessings. In this respect, I argue that the nineteenth-century shift in reproductive metaphors to the inorganic was accompanied by a reduction in fear appeals and personal responsibility rhetoric targeting individual women. Subsequently, in the early twentieth century as metaphors of sterility and mechanics shifted back to and mixed with metaphors of organic growth via Duncan's fertility metaphor, involuntary childlessness was increasingly framed as a "failure of [female] volition" (Sandelowski 475) and resultant of the female body's mechanical failure.

Positioned at the center of this essay's analysis are three primary texts that scholars have recognized as culturally influential and as representative of important trends for explaining female reproduction. Nicholas Culpeper's *A Directory for Midwives: Or, a Guide for Women, in Their Conception, Bearing and Suckling Their Children* was extensively circulated throughout the lay populations of England and the American colonies and was reprinted seventeen times after it was first released in 1651 (Thulesius 556). Aristotle's *Master-piece, or, The Secrets of Generation Displayed in all the Parts Thereof* was anonymously published in 1684, reprinted over one hundred times, and, according to Mary Fissell, "became the best-selling guide to pregnancy and childbirth in the eighteenth century" ("Hairy Women" 155). And

Clinical Notes on Uterine Surgery: With Special Reference to the Management of the Sterile Condition, published in 1867 by the notorious “father of gynecology” J. Marion Sims, was mandatory reading for would-be and practicing gynecologists well into the twentieth century (Sartin 500–505). These texts were aimed at midwives, lay women, and surgeons, respectively. The two earlier texts targeted lay readers (midwives were considered lay audiences because they were apprenticed rather than educated formally) while the later text targeted medical professionals. This shift in intended audience supports Margaret Marsh and Wanda Ronner’s theory that infertility was medicalized—deemed a treatable, medical disorder—in the nineteenth century (10, 25). As reproductive agency was repositioned into the hands of medical associations and their members, texts about reproduction followed suit by catering to those audiences. In this way, these texts illustrate a trend in many other discourses from their respective time periods that featured similar appeals but were not as widely disseminated or renowned.

My analysis traces how metaphors were used and how they evolved in these widely-circulated texts. I analyze “imagetexts”—“composite, synthetic works (or concepts) that combine image and text” (Mitchell 89)—from the two works that featured illustrations: *Aristotle’s Master-piece* and *Clinical Notes on Uterine Surgery*. Robin E. Jensen, Erin F. Doss, and Rebecca Ivic demonstrate that imagetexts can and do “cultivate productive metaphorical (and thus rhetorical) invention” (335), just as textually based metaphors encourage individuals to *envision* the tenor in question as the vehicle (Hulme 151–152). Indeed, imagetexts are frequently metaphoric and, as such, their analysis contributes another dimension to the study of metaphors as “mixed.” My analysis of the three texts identifies the key metaphors for married women’s childlessness evident therein, as well as the corresponding terms that “cluster” around those metaphors (Ivie 167; Gronnvoll and Landau) and constitute the underlying perspectives framing the tenor at hand. In this way, I am able to delineate the metaphorical evolution of involuntary childlessness from “barren” to “sterile” to “infertile,” a task that involves examining how each new figure corresponded with new rhetorical appeals and promoted new perceptions of married women’s childlessness. I conclude my analysis with a consideration of late-nineteenth and early twentieth-century mixed metaphors for infertility in light of the historical uses and implications of their individual vehicles.

Barren: Metaphors of Soil, Seed, and Fruit

In the largely agrarian communities inhabiting seventeenth- and eighteenth-century Europe and the American colonies, only families with many healthy children could successfully shoulder their livelihood’s unending demands. The Biblical injunction to “be fruitful and multiply” was more than a religious ideal in this context (Ober 299). Daily life revolved around the rhythms of planting, harvesting crops, and tending animals, all of which depended upon the continued growth of the family and surrounding community. Thus, metaphorical descriptions of childbearing women as rich soil, fostering sustained growth and prosperity, would have corresponded

with communities' overarching interests and values. Likewise, descriptions of childless, married women as "barren," unable to produce or nourish the next generation, would have played into widespread anxieties about communities' longevity and survival. When coupled with the era's high infant and child mortality rates, concerns about women's inability to conceive or bear children were among the period's most pressing.

In the majority of cases, seventeenth- and eighteenth-century women—rather than men—were considered the principal facilitators of generative success. Therefore, so-called "barren" women were almost always framed as personally responsible for their inability to metaphorically flower or bear fruit. In an effort to become pregnant and thereby redeem themselves as valuable members of the community, they were encouraged to engage in diet and exercise-related self-treatments, visit midwives who would offer herbal remedies, and pray (May 34–35; Marsh and Ronner 12, 16, 41). Nicholas Culpeper's 1651 guidebook, *A Directory for Midwives*, promoted this advice, although it did not include the religious appeals to prayer evident in other texts of the time such as *Aristotle's Master-piece*. Culpeper, an English apothecary and renowned medical writer, advocated Enlightenment ideals related to equality and reason. He professed vehemently against religious tyranny, the English monarchy, and the Royal College of Physicians, framing *A Directory for Midwives* as an informational guide for all classes of women that would enable them to discover and enact cures for generation-related ills. Culpeper hoped the book would help women to circumvent the oversight of religious, royal, and medical authorities and develop into what Fissell labels "vernacular healers" (*Vernacular Bodies* 141; Poynter 156). He structured the short, pocket-sized text in a question-answer format that was informal and invited readers to reference desired information quickly.

In its discussion of topics such as anatomy, conception (or lack thereof), miscarriage, and labor, *A Directory for Midwives* featured the term "barren" as a focal metaphor for women's childlessness within marriage, as well as associated metaphorical lenses for generation (e.g., "feed," "fruitful," "nourish," "seed"). These metaphors were introduced in the context of semence theory, which can be traced back to Hippocratic writings and holds that pregnancy results from the successful combination of male and female "seed" or, as Culpeper put it, "feed." Culpeper articulated conception as the result "of fruitful feed spent by a man, and mixed with a woman's feed to perfection, for the making of a child by the retentive and altering faculty of the womb" (131). The woman, according to Culpeper, must orgasm in order to "retain" the mixed seeds in her womb. The woman's blood must be healthy so that it can nourish the seeds, and the womb must maintain a climate that is conducive to the seeds' transformation and growth. In this respect, the woman's role in generation is not only that of contributor of seeds but also that of the pregnancy's "soil" (i.e., the mother's womb) and "nourishment" (i.e., the mother's blood). Thus, Culpeper reasoned that "barrenness is often from a fault in the women than the men" for "the men there is nothing required but fruitful feed spent into a fruitful womb. But women, besides the meeting of their own feed, must

receive, retain, and nourish the man's; and afford matter to the forming of the child in which diverse accidents happen, and any of these will cause barrenness" (135). From this perspective, so much of the organic process of conception and childbearing is the woman's responsibility that she alone must also be responsible for seeking out ways to rectify her childlessness.

Culpeper's text offered barren women a variety of possible cures, many of which depended heavily on an ideal of balance and bodily equilibrium that was derived from Galen's humoral theory (McLaren 33–35). Readers were instructed to ensure that their wombs were not too hot, moist, cold, or dry as such imbalances would almost certainly result in one's inability to conceive, carry, and birth fit offspring. Culpeper painstakingly delineated all of the different scenarios that might arise if distinct types of bodily imbalance were to ensue, noting, for instance, that "heat of the womb is necessary for conception; but if it be too much, it nourisheth not the feed of the man, but disperseth its heat, and hinders the conception" (22). He explained to his readers that, just as a plant requires warmth from the sun to grow, so does a potential or fledgling pregnancy require just the right amount of heat from the womb. But too much heat would end the pregnancy just as it would harm the plant. And just as the frozen grounds of winter bear little plant life, Culpeper argued that "cold and moist [wombs] are hard to conceive" while "a cold and dry womb is commonly barren" (22). According to Culpeper, the female body is just as sensitive to imbalance as is a crop of corn or a berry-yielding shrub. Thus, he concluded that the female body's environment and treatment must be closely monitored to ensure fruition.

Culpeper coupled his complex, uncertain map of the many possible reasons that a woman might fail to "flower" (i.e., menstruate) or bear "fruit" (i.e., offspring) with a corresponding list of concrete recommendations that individual women could follow to try to overcome their barrenness (67). While he framed barrenness as largely the fault of individual women, he also framed most women as capable of altering their behaviors and circumstances to address their generation-oriented troubles. For one, they could enlist a midwife to concoct one of the many herbal recipes that Culpeper scattered throughout the text—searching, perhaps endlessly, for just the right balance of succory, endives, violets, or waterlillies to, for instance, cool their over-heated wombs; these plant-based cures bore metaphorical witness to the organic nature of the problem at hand. Correspondingly, women were instructed to eat a diet that would "resist evil humors" and included "good juice" and not "salt, sharp, and sour things" (7, 32). If this approach was unsuccessful, they might increase their efforts to achieve bodily equilibrium by avoiding excessive sex, exercise, hard travel, the use of sharp pessaries, dancing, crying, or even coughing, for these activities would certainly keep the womb from retaining the "seed" (134). And all women, regardless of their specific health conditions, were encouraged to avoid such "external causes" of barrenness "as eating the heart of a Deer, or if she wear Jet about her, or if Harts-tongue be hanged about her bed; if she walk over the terms of another, or tread up on them unawares, or anoint with them, or put the juice of

Mints into her womb" (135). Here and elsewhere, Culpeper's metaphors of barren soil and fruitless seed functioned to cultivate the belief that individual women had the ability to monitor every detail of their environments, emotions, and behaviors until their bodies—at long last—sprouted.

Culpeper's message of constant vigilance was echoed in *Aristotle's Master-piece*, as was the focal metaphor "barren" and associated clustering metaphors of "fruit," "nourishment," and "sprouted seeds." Described by contemporary scholars as primarily a religiously ordained "sex manual," the anonymous manuscript devoted a significant amount of attention to the topic of barrenness, its causes, and its cures (Bullough 236). The text's authors—most likely seventeenth-century English medical writers hoping to capitalize on the credibility of Aristotle's existing publications on generation—justified their work by explaining that God ordained sex between married couples and demonstrated approval by blessing them with offspring (Beall 208). The major difference between *Aristotle's Master-piece* and *Directory for Midwives* was the former's appeal to divine authority. While *Directory for Midwives* included several indirect discussions concerning the importance of a woman's soul or spirit to her generative success, *Aristotle's Master-piece* argued explicitly that those who were out of God's favor would never reproduce. Early in the text, the authors explained that "when a young Couple are married, they naturally desire Children, and therefore use those means that Nature has appointed to that end. But notwithstanding their endeavors, they must know that the success of all depends on a Blessing of the Lord; and Children are a Blessing of the Lord" (3–4). Just as God's "Holy Spirit" drew from the "Abundance of his Goodness" to impregnate the "Vast Abyss," *Aristotle's Master-piece* argued that "no Fruits nor Pleasures, no Creature that hath Breath had Being in the place this lower World possesses" until God so deemed it (13).

Yet, rather than claiming that childless women could do nothing beyond praying for God to grant them children, the authors of *Aristotle's Master-piece* laid out many of the same cures for childlessness set out in Culpeper's work and, in so doing, employed extensive fruit-and-soil-oriented metaphors. The overarching message seemed to be that, while God would ultimately bless one with children or not (and it was of the utmost importance for individuals to act morally and pray for that blessing), it was still necessary for women to ensure that their bodies were appropriately prepared if they were to be so blessed. For instance, the authors agreed that "since Diet may and will alter the evil state of the Body to a better, it is necessary that such as are subject to Barrenness should eat such Meats only as tend to render them fruitful; and among such things as are inducing and stirring up thereto are all Meats of good Juice that nourish well and make the Body lively and full of Sap" (7). Readers were led to believe that, if they consumed appropriate, difficult-to-procure foods, their bodies would be ridden of evil and also flow and drip with the nutrients necessary for pregnancy. This directive was guided by humoral theory. Unlike Culpeper, however, the authors of *Aristotle's Master-piece* framed bodily equilibrium as a necessary—but not sufficient—prerequisite for conception. A woman might

attain balance by, for instance, avoiding “hot Air, soft lying, hot Meats and Spice” (84), but this would only cure her barrenness if she was *also* in God’s favor.

Once a woman became pregnant, the authors argued, she must not assume that she would necessarily birth a healthy child without due diligence. Throughout the text, they provided extensive, metaphorically rich descriptions of how she should protect her pregnancy from termination, noting, in one case, that she ought to avoid the “Act of Copulation” for the first four months following conception because it “moves and shakes the Womb, and consequently the Fruit therein causes the courses to descend” (123). This depiction of an individual jarring, say, an apple tree and causing un-ripened, inedible fruit to cascade to the ground was surely enough to stick in the mind’s eye of many newly pregnant women and ultimately stifle their affections. Similarly, the text also encouraged women to protect their growing bodies from the weather’s harsh elements, as one might do when tending a garden. In fact, they were literally instructed “to choose a Temperate Air, not infected with Fogs, airing from Marshes, Ditches, Ponds, Lakes, or Rivers, and not to go abroad in too hot, nor too cold Weather, nor when the South wind blows strong; for that Wind above all others, disturbs and disorders Women with Child, oftentimes causing Abortion” (125). *Aristotle’s Master-piece* repeatedly instructed women in how to cultivate conception and a healthy pregnancy, implying that they had the self-efficacy and tools to help them achieve success. However, the text also implied that those who were unsuccessful had somehow failed themselves and God, and they bore responsibility for their childlessness. That the directives offered were all but impossible to follow (e.g., avoid all south-blowing winds while with child, not to mention fogs and overly hot or cold weather) must have left many readers feeling apprehensive, ashamed, and probably unworthy of what they understood as God’s blessing.

What would have likely fostered even more uneasiness among readers of *Aristotle’s Master-piece* was that the text extended the metaphors of barren soil, seed, and fruit to include the potential for the production of abnormal or un-ripened fruit. The belief that childlessness, miscarriage, and children born with deformities were products of the devil was so common at this time that many women accused of witchcraft were brought to trial, at least in part, because they were childless or had few healthy offspring (May 27–28; Fissell, *Vernacular Bodies* 83). Arguments about the lurking evils of the womb in particular abounded (Creed 43) and functioned as a synecdoche for the maternal body’s potential transformation from a productive, creative force into the source of all things monstrous. In *Aristotle’s Master-piece*, women who were pregnant or hoping to conceive were warned against confronting any “monstrous sight” because it could easily transfer via her imagination into her womb and imprint itself on her unborn child. Drawing from the then-pervasive theory of maternal impressions, the authors warned that “some Children again are born with flat Noses, wry ouths, great blubber Lips, and ill-shaped Bodies, and most ascribe the reason to the conceit of the Mother, who has busied her Eyes and Mind upon some ill-shaped or distorted Creatures” (20–21). From this

perspective, women whose thoughts and desires became rooted in images deemed horrific, lusty, or otherwise unnatural would impress those images directly onto their progeny and, essentially, ruin them before they could be born. This sort of appeal to women's capacity for birthing monsters upheld "the dominant view of subjectivity" (Braidotti 140) by encouraging women who had not yet conceived or given birth to shield their eyes and minds from anything that might be perceived as untoward.

Beyond disciplining women before the conception or birth of their children, appeals to the monstrous maternal were also enlisted as argumentative strategies to discredit individual women after they had given birth (Buchanan 245–256). For example, *Aristotle's Master-piece* featured an imagetext of a naked woman covered in hair and followed closely by a dark-skinned, non-descript child (see Figure 1). The illustration's caption read, "The Effigies of a Maid all Hairy, and an Infant that was Born Black, by the Imagination of their Parents" (39). The accompanying text—a vital element of the imagetext as a whole—dealt not with the parents, as the caption suggested, but instead with the mother specifically, who, "at the time of Conception," beheld "the Picture of a Black-moor" and subsequently "conceived and brought forth an Ethiopian" (38). The child, whose illustration served as "a visible image of its mother's desire" (Creed 46), offered immediate proof of her guilt, guilt related not even to her sexual activity necessarily but to her private sexual longings. The child's portrayal as a dark-skinned, Ethiopian played into the racist reasoning that Rosi Braidotti finds at the core of teratology (i.e., the scientific study of monsters during the European Renaissance) (135, 143). What Braidotti deems "the racialization of the monstrous body" functioned both to conflate racial and geographical diversity with otherness and to argue that blackness and monstrosity were evidence of maternal sin (145). In this depiction, the mother's body—like her child's—was directly marked by sin. Her nakedness functioned to connect her with nature and what Julia Kristeva terms the abject (2; Creed 9, 44). Her mass of body hair played into the trope of the "hairy virgin" who was said to have been born from a mother who had, herself, "gazed too intently" upon an illustration of St. John wearing animal skins (Buchanan 241). In this way, the imagetext suggested that the sins of not one but two generations of mothers were to blame for the monstrous birth on display, a claim that added credence to the authors' warning that "nothing is more powerful than the Imagination of the Mother," as well as the admonition that all women must therefore iron themselves against the devil's impending appropriation of their wombs and the fruit that might grow therein (20–21). In this respect, *Aristotle's Master-piece* took Culpeper's message in *Directory for Midwives* one step further by positioning so-called barren women as deficient not only in terms of bodily health and equilibrium but also in terms of mental and spiritual fitness. The metaphorical lens driving these texts precipitated the belief that successful childbearing depended almost entirely upon the relentless caution of individual women.



Figure 1 Illustration featured in *Aristotle's Master-piece* of a woman who had focused her attention on the image of a "Black-moor" and conceived and birthed an "Ethiopian" (39).

Sterile: Metaphors of Machinery

By the early nineteenth century, views about the role that women played in causing and then potentially overcoming their reproductive problems were changing. These views were reflected in a growing number of texts that traded the metaphor "barren" for the metaphor "sterile" and, correspondingly, traded "soil," "seed," and "fruit" for metaphors related to "machinery." For instance, discourses from this time about human "generation" were inundated with references to "re-production," a

metaphor that functioned to frame conception and birth as elements of a manufacturing process (McGrath 31–32). Machine-oriented metaphors aligned with the values of increasingly industrialized societies in Europe and the United States, societies driven by Enlightenment ideals related to supply-and-demand economics, the separation of church and state, and scientific empiricism. In this context, everything from social bodies to modes of mass communication came to be understood as machines composed of individual, interconnected parts. In the realm of medicine in particular, the body-as-machine metaphor (Muri 3) spoke to Cartesian iatromechanic philosophy which posited that the body and its parts subscribe to the tenets of mechanics. Although challenged by the eighteenth-century theory of vitalism (i.e., the belief that living organisms are constitutively different from non-living organisms), many medical schools and associations in the eighteenth and nineteenth centuries ultimately upheld the belief that the body is best understood as a machine—a conviction that some argue is also a central tenet of contemporary biomedical models of medicine (Applebaum 501–502; Segal 121). By the second half of the nineteenth century, the development of “mechanical aids” such as the stethoscope and the speculum had contributed further to the circulation of discourses characterizing the human body *itself*—and the female body in particular—as a quantifiable, mechanical structure (Reiser 38, 55).

Scholars have marked the shift in terminology from “barren” to “sterile” as a sign of fertility’s immersion within the realm of medical diagnosis, and much discourse from this era provides evidence for this claim (Marsh and Ronner 10). For instance, one of the first uses of the term “sterile” for a woman’s childlessness within marriage appeared in Dr. James Walker’s 1797 dissertation, *An Inquiry into the Causes of Sterility in Both Sexes*. Walker employed the old terminology to introduce the new, noting that “Physicians should be induced to a diligent investigation of the causes of Barrenness; for upon inquiry it appears that many causes of Sterility are not without remedy” (2). He went on to brief his physician readers about sterility’s causes, signs, and cures and, thereby, prepare them to treat the childless, married woman’s body as a medical challenge in need of their professional oversight. Walker’s goal was to position treatment for sterility outside the realm of midwives, lay healers, and even childless women themselves, and over time the term “sterile”—both when applied to a state of cleanliness and to reproductive function—became synonymous with medical treatments and facilities.²

²In the early days of its use in the context of human reproductive function, the term “sterile” seems to have been used as little more than a synonym for the term “barren” and thus generally associated with many of the organic metaphors that clustered around the term “barren.” Unlike “barren,” however, “sterile” and “sterility” were at first employed primarily in the medical realm. Within that realm, “sterile” quickly transitioned from its early organic associations to denote something of mechanical origin, particularly in light of the emergence of bacteriology in the mid-nineteenth century (Reiser 82–83) and, correspondingly, the growing use of “sterile” as a denotation for the safety and health afforded by the eradication of micro-organisms. As Margarete J. Sandelowski explains, the language of sterility brought with it the implication that there was some underlying “mechanical” problem with the body, that the body itself must be considered as outside the realm of biological contaminants and as in need of technical-mechanical diagnosis and repair (480).

Dr. J. Marion Sims, author of the 1867 text *Clinical Notes on Uterine Surgery*, had a similar goal. Sims initially gained notoriety for his attempts to cure women of vesico-vaginal fistula, a condition in which the septum that separates the bladder from the vagina is destroyed, usually as a result of prolonged labor. Those stricken with this ailment experience a constant, involuntary stream of urine—and sometimes feces—and eventual putrefaction of the vaginal cavity, which is accompanied by a fetid odor. Sims was convinced that he could surgically reconstruct the vaginal wall, thereby ending the suffering of numerous childbearing women. In the mid-nineteenth century, he began testing his theories and surgical techniques on slave women in the southern United States (McGregor 33–68). Congress had deemed overseas slave trading illegal in 1807, a decision that catalyzed reproductive engineering or “breeding” among existing slaves to ensure new generations of forced labor (May 54–55). In this context, Sims had little trouble finding slave owners who would offer up afflicted slave women with the hope that Sims’ experimental methods would enable them to rejoin the workforce and maybe even produce more children. The ethics of Sims’ recruitment and data-collection methods have since been widely criticized, not only because he operated on those who could not give their consent to treatment but also because he operated as many as thirty times on individual women and, when treating slave women, never used anesthesia (Bernier 118–119). Sims’ conceptualization of female patients as objective commodities (Scheper-Hughes and Lock 22) upon which to test his scientific hypotheses was something that he carried with him into his later gynecological work and writings.

In 1853, Sims moved to New York and drew from the knowledge that he had obtained while experimenting on slave women to address the reproductive concerns of Anglo-Saxon women from a range of social classes. By that time, he had developed the Sims speculum to better observe women’s interior bodies, an accomplishment that situated him among the growing number of medical professionals dedicated to enlisting technologies to visualize and enumerate the body’s internal happenings (Reiser 55). Sims used the speculum to reach the conclusion that most female reproductive problems were structural and required surgical intervention. In the years that followed, Sims opened the Woman’s Hospital of the State of New York and became even more convinced that a surgeon’s knife could solve almost any reproductive trouble a woman might encounter, including sterility (Sims, *Story of My Life* 267–296; Ellis 259). In *Clinical Notes on Uterine Surgery*, he delineated this perspective, metaphorically positioning women’s body parts as machines that, if broken down (i.e., diagnosed with amenorrhea or sterility), required the expertise of a mechanic (i.e., surgeon) to be restored to working order. Sims’ text framed individual women as possessing very little agency related to curing or preventing involuntary childlessness and, therefore, as relatively disconnected from a sterility diagnosis. Nevertheless, I contend that, in the midst of his machine-oriented, objectifying (and therefore undeniably problematic) discourse, Sims’ articulation of sterility may have offered Anglo-Saxon women in particular

some degree of respite from the guilt, angst, and fear that accompanied many discussions of the barren in years past (even if, as Marsh and Ronner have noted, Sims' "cures" were of questionable validity [55, 61]).

While *Directory for Midwives* and *Aristotle's Master-piece* focused on helping readers to achieve bodily equilibrium, often via herbal, non-invasive remedies, *Clinical Notes on Uterine Surgery* focused on providing surgeons with the information that they would need to intervene in the "abnormal" (i.e., deviant) body and remove anything deemed extraneous or obstructive. According to Sims, solving the problem of sterility was "by means almost purely surgical" and might involve "attacking" an "offending organ" or forcing open an obstructed cervix (1–2, 54). Absent from this almost 400-page document were appeals to the natural, the balanced, or the non-invasive. Instead, the text focused on three primary ideas: the identification of "normal" reproductive body parts (often in isolation of the body as a whole); the standardization of medical knowledge for the surgical profession; and the demarcation of directives concerning how one might best alter the sterile body to achieve normalcy. Sims began the text by categorizing sterility according to several different "classes" and, later, noting that "the sterile, unimpregnated uterus" was the opposite of a "normal" uterus (1–2). He went on to define a "normal type" of cervix as rounded and truncated, and he featured an imagetext of a cross-sectioned, isolated cervix in the normal shape—complete with line drawings denoting different degrees of deviant positioning, which would, according to Sims, ultimately require surgical intervention (214) (see [Figure 2](#)). Out of context, a reader might never guess what this basic, undetailed "diagram" was intended to depict as it included no sign of a woman's body. In this respect, it was one of many nineteenth-century medical illustrations that functioned to "take women out of the picture, especially in the matter of generation and reproduction" (Sims 178; McGrath 4). The illustration's focus demonstrated that Sims' concern was not on the body (woman) as a whole but rather on achieving the standard look and function of individual body parts (e.g., the cervix), all in the service of reproduction. The body-as-machine metaphor and the mind-body dualism that is one of its underlying assumptions (Segal 122) focused Sims' treatments and writings not on patients' subjective experiences or even their behaviors but on the apparent normalcy of their cervixes.

Sims himself was quite explicit about his view of reproductive bodies and their functions as "mechanical." He noted, for instance, that "the act of copulation is purely mechanical. It is only necessary to get the semen into the proper place at the proper time. It makes no difference whether the copulative act be performed with great vigour and intense erethism, or whether it be done feebly, quickly, and unsatisfactorily" (188). He then concluded that "provided the semen be deposited at the mouth of the womb, everything else being as we would have it" (188). Sims depicted the male body as an active "depositor" and the female body as merely a receptive loading area, the womb's "mouth" so-called not to highlight the organic nature of the cervix but rather to mirror descriptions of, for instance, the "mouth" of a

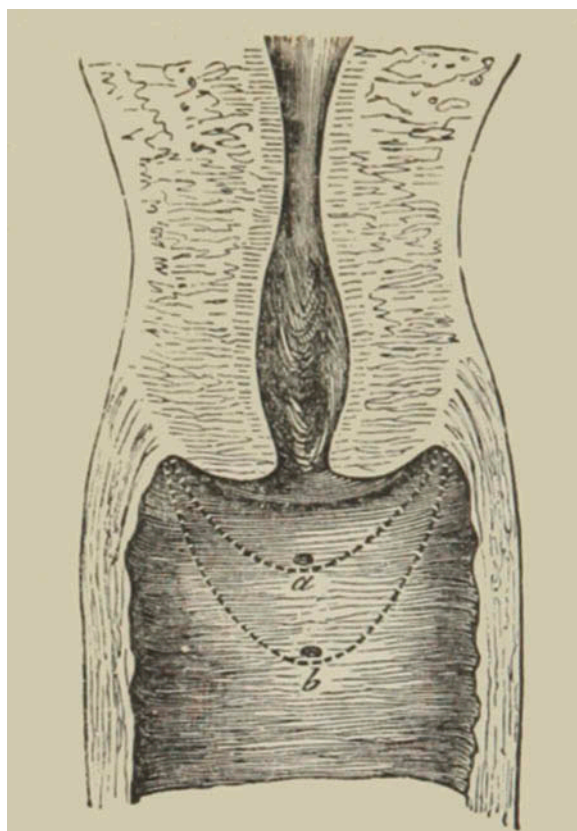


Figure 2 Sims' illustration of an isolated "normally" positioned cervix, contrasted with line drawings depicting different degrees of deviant positioning.

threshing machine or the "eye" of a camera. By delineating the mechanical nature of conception as a whole, he worked to debunk longstanding beliefs concerning the necessity to conception of variables such as female orgasm, appropriate maternal images, and humoral balance. As long as all the body parts and substances were functioning and appropriately timed and positioned, Sims maintained that a pregnancy "would have it." Conception, according to Sims, was no more complicated than, for instance, the process of achieving railroad locomotion and, therefore, he wholeheartedly accepted "the charge of mechanical views" (188).

Although Sims mentioned both male and female bodies in his discussion of conception, he tended to focus most extensively on the mechanics of the female body—perhaps because he framed the male as a more active participant in the reproductive process. For instance, at one point in the text he provided instructions outlining how female patients should be positioned during certain types of pelvic examinations. He demanded that "the patient . . . be taught to maintain unflinchingly this position; she must not pitch forwards and make the pelvian angle obtuse"

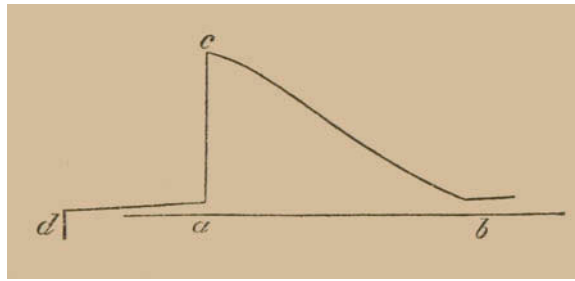


Figure 3 A diagram designed to aid surgeons in positioning women on the examination table.

(14). The accompanying figure was not, as one might expect, of a woman bent awkwardly into some painful, triangular pose, but of a simple line drawing illustrating a ninety-degree angle (see Figure 3). Sims labeled each line with a lower-case letter and supplied the following explanation: “The knees are to be separated eight or ten inches; the thighs are to be at about right angles with the table; thus the plane of the table (*ab*), the axis of the thighs (*ac*), and that of the body (*cb*), would form a right-angled triangle, of which the thighs and table would make the right angle, and the body the hypotenuse” (14). This “schematic body,” as James Elkins would call it, functioned as “a way of pushing the body to some distance, purging its objectionable stuffing or whittling away at its bulky skeleton until nothing but twigs remain” (249–250). Sims demanded that the woman’s thighs be as inert and precise as the “plane of the table,” their positioning dictated not by the feelings or abilities of their owner but by the surgeon’s need to view and access specific body parts. He assured his readers that “with my speculum everything is brought so plainly into view that there is no possibility of making a mistake” (17, 72–73). Therein, not only did he highlight his dedication to what Michel Foucault terms the “medical gaze” (215) and what Peter Conrad labels “medical surveillance” (216), he also drew from the assumption that the use of particular tools or “instruments,” when applied to specific body parts, would ultimately result in a standard outcome. Each element of this equation—be it a woman’s thigh, a speculum, or a table top arranged at an exact angle—was portrayed as an object in the service of mechanical repair.

The overarching portrayal of sterility and its causes and cures in *Notes on Uterine Surgery* implied that women’s bodies—and women themselves—were a compilation of objective parts. This perspective furthered the idea that women lacked the ability to prevent, cause, or cure their own reproductive problems. While barren women of earlier centuries were charged with everything from harboring impure thoughts to consuming the wrong types of food to cavorting with the devil, Sims framed sterile women as largely blameless for their condition and simply in need of a surgical tune-up. His text prescribed no self-treatments, remedies, or prayers that doctors might instruct their patients to follow, and neither did it suggest fear appeals that might frighten sterile women into behaving in prescribed ways. The “cure” for sterility, according to Sims, had to do with the expert techniques of the surgeon,

observing, cutting, removing, opening, expanding, and excising patients' bodies to achieve normalcy and function (34). Sims' rhetoric indicated that it would be illogical to make women feel accountable for their inability to bear children because they had no control over the mechanical success of human reproduction. In this respect, Sims' discourse of sterility traded messages concerning women's responsibility and accountability for objectifying messages that may have induced women's peace of mind, particularly if they were among the few with access to surgical treatment.³

Mixing Metaphors

Just two years after Sims published *Notes on Uterine Surgery*, Duncan first used the word "fertility" in the context of women's reproductive capacity (3). The inverse of Duncan's term—"infertility"—did not make its way into mainstream discourse until the twentieth century, and even then the term "sterility" continued to make regular appearances, particularly in the realm of medical rhetoric. Yet the introduction of fertility into the ongoing conversation about reproduction forecast new conceptual and metaphorical lenses for procreation, childbearing, and womanhood. Rather than advancing unique metaphorical descriptions, however, those who discussed the sterile and/or (in)fertile female body during the late nineteenth and early twentieth centuries tended to mix metaphors of the past. References to women's bodies as fruitful *and* as machines, for example, offered a seemingly incongruous illustration of the topic at hand, especially when previous metaphorical descriptions of fruit and then machinery invited such contrasting conclusions about women's role in their reproductive output or ability.

In many ways, this mixed metaphor was symptomatic of a widespread return to naturalistic, religiously oriented views about health that were developed in the context of medicalization and scientific reasoning. As mid-nineteenth-century birthrates fell dramatically among Anglo-Saxon Protestants in Europe and the United States, religious, political, and medical leaders alike became dedicated to reversing the trend (Pfeffer 5). Their appeals concerning women's health and behavior tended to interweave argumentative warrants from different spheres of discourse. Discussions of sterility in the medical sphere, for instance, became increasingly likely to form "scientific idioms" by incorporating appeals to the moral and the social (Lynch 6). An "alliance" between scientific empiricism and religious revelation was brokered under the supposition that the inorganic machinery of science can reveal truths hidden in the natural, organic world (Lessl 380, 387) and that scientific methods can be, in this way, aligned with the divinely inspired certainties of nature. In contrast to Sims' strictly mechanical and technical portrayals

³It was several years after the publication of Sims' text that Lydia E. Pinkham began marketing her "Vegetable Compound" directly to consumers, promising cures for women's "ills" ranging from menstrual cramps to uterus displacements (Conrad and Leiter 827–282). Pinkham did not mention barrenness, sterility, or involuntary childlessness, in particular, but her appeals to the consumption of herbal and natural remedies signaled a turn-of-the-century shift in fertility discourse focused on medicalization *and* self-help.

of sterility, then, later discourses about sterility tended to build from this “moral physiology” (Stormer 76) by portraying married, childless women as culpable for somehow defying their nature. As Sandelowski explains, “biologic dysfunctions in the involuntary domain” were framed as “the results of actions in the voluntary domain,” particularly for women (478). Women’s body parts were still likely to be equated with machinery but, by this point, women themselves were increasingly framed as capable of acting in ways that would protect or destroy that machinery. With increased understanding of the relationship between untreated gonorrhea and childlessness, for instance, women with blocked fallopian tubes or pelvic inflammation (i.e., failed machinery) were depicted as promiscuous, impious, or, at the very least, naïve to their husbands’ adultery. Similarly, childless women with a history of abortion or contraceptive use were blamed for thwarting nature and/or God and thereby destroying their reproductive machinery. And women who dedicated themselves to educational and professional pursuits were, according to social hygienists such as Dr. Edward Clarke, diverting blood flow from their reproductive organs to their brains and putting themselves at risk for sterility as well as many other health problems.

In Clarke’s infamous 1873 tract *Sex in Education; or, A Fair Chance for the Girls*, he employed an organic metaphor to explain what he framed as a rational, medical fact—that women and men should not be similarly educated because their physical “organization” was so vastly different. He argued that “the gardener may plant, if he chose, the lily and the rose, the oak and the vine, within the same enclosure; let the same soil nourish them, the same air visit them, and the same sunshine warm and cheer them” (126–127). Clarke held that—due to their physiological differences—one of the plants in this scenario would thrive while the other would not. He concluded, at one point, that the “identical education of the two sexes is a crime before God and humanity, that physiology protests against, and that experience weeps over” (127). Clarke conjured a Biblical understanding of women as naturally fruit-bearing to make the mechanical argument that “the reproductive apparatus—the engine within an engine” depended upon a concentrated, unobstructed supply of blood (131). Clarke’s general idea—that individuals have a set amount of energy (or blood) and that women in particular can devote that energy to reproduction *or* to other pursuits—eventually came to be known as “energy conservation” in the late nineteenth century, a philosophical discourse that drew many adherents.

Theoretically, the practice of reasoning across different spheres of argumentation (à la Clarke) has been shown to be persuasive and instructive in some scenarios, just as mixing multiple metaphorical vehicles to describe a distinct idea (i.e., tenor) can function, according to Ceccarelli, to “convey the richness of a complex subject matter better than does a single simplified image” (“Neither Confusing” 103–104). But Ceccarelli also finds that the use of two mixed vehicles can weaken and constrain them both in certain circumstances, which may be a particular risk in cases where the tenor is especially abstract (e.g., involuntary childlessness) and the vehicles in

question (e.g., fruit and machinery) have historically been enlisted toward such distinct ends (e.g., blaming women for their childlessness versus situating women as without reproductive agency). In the case at hand, it seems that mixing past metaphors resulted in a corresponding amalgamation of their entailments. These entailments left involuntarily childless women of the early twentieth century in the unfortunate position of being constituted as both responsible and as lacking the means to take responsibility. In this respect, the specific, un-contextualized vehicles themselves and the terms clustering around them played less of a role in shaping the resultant mixed metaphor than did the ways in which those vehicles had been enlisted toward the same tenor in distinct discourses of the past. If both vehicles had, for instance, supported complementary visions of women's role in their reproductive health, even if those vehicles seemed disjointed or contradictory on the surface, the resultant mixed metaphor may have offered not a double bind but a discursive tool for the interpretation of experiences.⁴

In many ways, it is difficult not to draw parallels between these discourses of the past and discourses of the present day. While the mixed metaphors of fruit and machinery tend to be less glaring than they were in discourses of the early twentieth century, their competing arguments and implications are no less evident. On one hand, twenty-first-century women live in a world not so different from that described by Nicholas Culpeper or the authors of *Aristotle's Master-piece* in that they are governed by an overwhelming number of self-help recommendations for successful conception and pregnancy (Betterton 83; Seigal). Just as readers of *Aristotle's Master-piece* encountered directives involving their exposure to fog and wind, spicy foods and excitement, today women are bombarded by pre- and post-conception guidelines that, as Emily Oster points out, are "often contradictory and occasionally infuriating" (xii). Instructed to conceive neither too early (i.e., before age 20) nor too late in life (i.e., after age 35) (Birrittieri), to allow conception to occur "naturally" (Weschler) but to know when to visit a specialist (Potter and Hanin), to relax while still "taking charge" (Weschler), twenty-first-century women might be better off attempting to avoid "hot Air" and "soft lying" (*Aristotle's Master-piece* 84). Both women of the distant past and women of the present have been constituted as in-control of their destinies (and the health and destinies of their offspring) and therefore as responsible when things do not go as planned.

On the other hand, the myriad new twenty-first century reproductive technologies have more women, and increasingly men, turning to the expertise of fertility doctors and reproductive endocrinologists. Infertility patients relinquish control of their supposedly abnormal, defective bodies to those who extract, cut, inject, and/or otherwise intervene with technical instruments and objective vision

⁴It should be noted that a discursive double-bind, in and of itself, may not necessarily be associated with lowered self-efficacy and/or with beliefs and behaviors that negate self-help, just as fatalistic statements have been shown to exist alongside statements that endorse individual efficacy (Keeley, Wright, and Condit 743). Future research on how double-binds play out and are enlisted, particularly among lay publics and those at higher risk for health and literacy disparities, would shed much needed light on this issue.

(Britt). While the monstrous maternal trope of yore played out in the midst of organic metaphors, the monstrous maternal of today—particularly in the context of infertility—is decidedly a cyborg, part human, part machine (Haraway 149). Cyborg wombs, what Anne Balsamo deems “a metonym for the entire family body” (80), are said to put infants, bloodlines, and even societies at risk. Undertaking feats deemed unnatural to the human body (e.g., gestating six or even eight babies at one time; acting as surrogates for embryos conceived elsewhere), the cyborg womb orchestrates devastation the likes of which has never been seen before (e.g., perilous octuplet births; long-term health problems for offspring and mother alike; societies made up of unhealthy defectives). That this version of the monstrous maternal trope is no less gendered, raced, and classed than versions of the past speaks to the system of “stratified reproduction” from which it is today—and long has been—voiced (Colen; Ginsburg and Rapp). In these cases, the monstrous-maternal woman is enveloped within the realm of the technical because she has failed, somehow, in the realm of the natural. She is constituted as responsible for her failure in this realm and yet as lacking the expertise to oversee her cure; she is, as Tasha Dubriwny explains, a “vulnerable empowered woman.” In this contradiction lies the legacy of early twentieth-century metaphors for (in)fertility, metaphors wherein fruit and machinery, the organic and the inorganic, are—for better or for worse—mixed.

References

- Applebaum, Wilbur, ed. *Encyclopedia of the Scientific Revolution: From Copernicus to Newton*. New York: Garland Publishing, 2000. Print.
- Aristotle's *Master-piece, or, The Secrets of Generation Displayed in all the Parts Thereof* . . . 1684. London: Printed for W. B., 1694. Print.
- Balsamo, Anne. *Technologies of the Gendered Body: Reading Cyborg Women*. Durham, NC: Duke University Press, 1996. Print.
- Beall, Otho T. “Aristotle's Master Piece in America: A Landmark in the Folklore of Medicine.” *The William and Mary Quarterly* 20.2 (1963): 207–222. Print.
- Bernier, Barbara L. “Class, Race, and Poverty: Medical Technologies and Socio-Political Choices.” *Harvard Blackletter Law Journal* 11 (1994): 115–144. Print.
- Betterton, Rosemary. “Promising Monsters: Pregnant Bodies, Artistic Subjectivity, and Maternal Imagination.” *Hypatia* 21.1 (2006): 80–100. Print.
- Birrittieri, Cara. *What Every Woman Should Know about Fertility and Her Biological Clock*. Pompton Plains, NJ: Career Press, 2009. Print.
- Black, Max. “Metaphor.” *Proceedings of the Aristotelian Society* 55 (1954–1955): 273–294. Print.
- Braidotti, Rosi. “Signs of Wonder and Traces of Doubt: On Teratology and Embodied Differences.” *Between Monsters, Goddesses and Cyborgs: Feminist Confrontations with Science, Medicine and Cyberspace*. Eds. Nina Lykke and Rosi Braidotti. London: Zed Books, 1996. 135–152. Print.
- Britt, Elizabeth. *Conceiving Normalcy: Rhetoric, Law, and the Double Binds of Infertility*. Tuscaloosa: University of Alabama Press, 2001. Print.
- Buchanan, Lindal. “A Study of Maternal Rhetoric: Anne Hutchinson, Monsters, and the Antinomian Controversy.” *Rhetoric Review* 25.3 (2006): 239–259. Print.

- Bullough, Vern L. "An Early American Sex Manual, or, Aristotle Who?" *Early American Literature* 7.3 (1973): 236–246. Print.
- Ceccarelli, Leah. "Neither Confusing Cacophony nor Culinary Complements: A Case Study of Mixed Metaphors for Genomic Science." *Written Communication* 21.1 (2004): 92–105. Print.
- . "Rhetoric and the Field of Human Genomics: The Problems and Possibilities of Mixed Metaphors." *Gene(sis): Contemporary Art Explores Human Genomics*. Ed. Robin Held. Seattle, WA: Henry Art Gallery, 2001. CD-ROM.
- Colen, Shellee. "'Like a Mother to Them': Stratified Reproduction and West Indian Childcare Workers and Employers in New York." *Feminist Anthropology*. Ed. Ellen Lewin. Malden, MA: Wiley-Blackwell, 2006. 380–396. Print.
- Condit, Celeste. *The Meanings of the Gene: Public Debates about Human Heredity*. Madison: University of Wisconsin Press, 1999. Print.
- Conrad, Peter. "Medicalization and Social Control." *Annual Review of Sociology* 18 (1992): 209–232. Print.
- Conrad, Peter, and Valerie Leiter. "From Lydia Pinkham to Queen Levitra: Direct-to-Consumer Advertising and Medicalisation." *Sociology of Health & Illness* 30.6 (2008): 825–838. Print.
- Clarke, Edward Hammond. *Sex in Education; or, A Fair Chance for the Girls*. Boston: James R. Osgood and Company, 1873. Print.
- Creed, Barbara. *The Monstrous-Feminine: Film, Feminism, Psychoanalysis*. New York: Routledge, 1993. Print.
- Culpeper, Nicholas. *A Directory for Midwives, or, A Guide for Women, in their Conception, Bearing and Suckling their Children*. London: Peter Cole, 1651. Print.
- Demircioğlu, Merve. "The Rhetoric of Belief and Identity Making in the Experience of Infertility." *Culture and Religion* 11.1 (2010): 51–67. Print.
- Dubriwny, Tasha N. *The Vulnerable Empowered Woman: Feminism, Postfeminism, and Women's Health*. New Brunswick, NJ: Rutgers University Press, 2013. Print.
- Duncan, James Matthews. *Fecundity, Fertility, Sterility, and Allied Topics*. New York: William Wood & Co., 1868. Print.
- Elkins, James. *Pictures of the Body: Pain and Metamorphosis*. Stanford, CA: Stanford University Press, 1999. Print.
- Ellis, Harold. "The Sims' Speculum." *Journal of Perioperative Practice* 16.5 (2006): 259. Print.
- Fissell, Mary E. "Hairy Women and Naked Truths: Gender and the Politics of Knowledge in 'Aristotle's Masterpiece.'" *The William and Mary Quarterly* 60.1 (2003): 43–74. Print.
- . *Vernacular Bodies: The Politics of Reproduction in Early Modern England*. New York: Oxford University Press, 2004. Print.
- Foucault, Michel. *The Birth of the Clinic*. New York: Vintage, 1973. Print.
- Ginsburg, Faye D., and Rayna Rapp, eds. *Conceiving the New World Order: The Global Politics of Reproduction*. Berkeley: University of California Press, 1995. Print.
- Gronnvoll, Marita and Jamie Landau. "From Viruses to Russian Roulette to Dance: A Rhetorical Critique and Creation of Genetic Metaphors." *Rhetoric Society Quarterly* 40.1 (2010): 46–70. Print.
- Hall, G. Stanley. *Adolescence: Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion, and Education*. New York: D. Appleton and Company, 1904. Print.
- Haraway, Donna. *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, 1991. Print.
- Hulme, Thomas E. *Speculations: Essays on Humanism and the Philosophy of Art*. London: Kegan Paul, Trench, Trubner & Co., 1924. Print.
- Ivie, Robert L. "Metaphor and the Rhetorical Invention of the Cold War 'Idealists.'" *Communication Monographs* 54.2 (1987): 165–182. Print.

- Jensen, Robin E., Erin F. Doss, and Rebecca Ivic. "Metaphorical Invention in Early Photojournalism: New York Times Coverage of the 1876 Brooklyn Theater Fire and the 1911 Shirtwaist Factory Fire." *Critical Studies in Media Communication* 28.4 (2011): 334–352. Print.
- Keeley, Bethany, Lanelle Wright, and Celeste M. Condit. "Functions of Health Fatalism: Fatalistic Talk as Face Saving, Uncertainty Management, Stress Relief and Sense Making." *Sociology of Health & Illness* 31.5 (2009): 734–747. Print.
- Kristeva, Julia. *Powers of Horror: An Essay on Abjection*. Trans. Leon S. Roudiez. New York: Columbia University Press, 1982. Print.
- Lakoff, George, and Mark Johnson. *Metaphors We Live By*. Chicago: University of Chicago Press, 1980. Print.
- Lessl, Thomas M. "Naturalizing Science: Two Episodes in the Evolution of a Rhetoric of Scientism." *Western Journal of Communication* 60.4 (1999): 379–396. Print.
- Lynch, John. *What are Stem Cells? Definitions at the Intersection of Science and Politics*. Tuscaloosa: The University of Alabama Press, 2011. Print.
- Marsh, Margaret, and Wanda Ronner. *The Empty Cradle: Infertility in America from Colonial Times to the Present*. Baltimore, MD: The John Hopkins University Press, 1996. Print.
- Martin, Emily. "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles." *Signs: Journal of Women in Culture and Society* 16.3 (1991): 485–501. Print.
- May, Elaine Tyler. *Barren in the Promised Land: Childless Americans and the Pursuit of Happiness*. Cambridge, MA: Harvard University Press, 1997. Print.
- McGrath, Roberta. *Seeing Her Sex: Medical Archives and the Female Body*. Manchester, UK: Manchester University Press, 2002. Print.
- McGregor, Deborah Kuhn. *From Midwives to Medicine: The Birth of American Gynecology*. New Brunswick, NJ: Rutgers University Press, 1998. Print.
- McLaren, Angus. *Reproductive Rituals: The Perception of Fertility in England from the 16th to the 19th Century*. New York: Routledge, 1985. Print.
- Mitchell, W. J. T. *Picture Theory*. Chicago: University of Chicago Press, 1994. Print.
- Morice, Philippe, Patrice Josset, Charles Chapron, and Jean-Bernard Dubuisson. "History of Infertility." *Human Reproduction Update* 1.5 (1995): 497–504. Print.
- Muri, Allison. *The Enlightenment Cyborg: A History of Communications and Control in the Human Machine, 1660–1830*. Toronto: University of Toronto Press, 2007. Print.
- Neff, Deborah L. "The Social Construction of Infertility: The Case of the Matrilineal Nāyars in South India." *Social Science & Medicine* 39.4 (1994): 475–485. Print.
- Ober, William B. "Reuben's Mandrakes: Infertility in the Bible." *International Journal of Gynecological Pathology* 3.3 (1984): 299–317. Print.
- Osborn, Michael M., and Douglas Ehninger. "The Metaphor in Public Address." *Communication Monographs* 29.3 (1962): 223–234. Print.
- Oster, Emily. *Expecting Better: How to Fight the Pregnancy Establishment with Facts*. New York: The Penguin Press, 2013. Print.
- Pfeffer, Naomi. *The Stork and the Syringe: A Political History of Reproductive Medicine*. Cambridge, MA: Polity Press, 1993. Print.
- Potter, Daniel, and Jennifer Hanin. *What to Do When You Can't Get Pregnant: The Complete Guide to All the Options for Couples Facing Fertility Issues*. 2nd ed. Boston, MA: Da Capo, 2013. Print.
- Poynter, Frederick Noël Lawrence. "Nicholas Culpeper and His Books." *Journal of the History of Medicine and Allied Sciences* 17.1 (1962): 152–167. Print.
- Reiser, Stanley J. *Medicine and the Reign of Technology*. Cambridge: Cambridge University Press, 1978. Print.

- Richards, I. A. *The Philosophy of Rhetoric*. New York: Oxford University Press, 1936. Print.
- Rorty, Richard. *Contingency, Irony, and Solidarity*. New York: Cambridge University Press, 1989. Print.
- Sandelowski, Margarete J. "Failures of Volition: Female Agency and Infertility in Historical Perspective." *Signs* 15.3 (1990): 475–499. Print.
- Sartin, Jeffrey S. "J. Marion Sims, the Father of Gynecology: Hero or Villain?" *Southern Medical Journal* 97.5 (2004): 500–505. Print.
- Scheper-Hughes, Nancy, and Margeret M. Lock. "The Mindful Body: A Prolegomenon to Future Work in Medical Anthropology." *Medical Anthropology Quarterly* 1.1 (1987): 6–41. Print.
- Segal, Judy Z. *Health and the Rhetoric of Medicine*. Carbondale: Southern Illinois University Press, 2005. Print.
- Seigal, Marika. *The Rhetoric of Pregnancy*. Chicago: University of Chicago Press, 2014. Print.
- Sims, J. Marion. *Clinical Notes on Uterine Surgery: With Special Reference to the Management of the Sterile Condition*. New York: William Wood & Co., 1866. Print.
- . *The Story of My Life*. Ed. H. Marion Sims. New York: D. Appleton and Company, 1884. Print.
- Stormer, Nathan. *Articulating Life's Memory: U.S. Medical Rhetoric about Abortion in the Nineteenth Century*. New York: Lexington, 2002. Print.
- Thulesius, Olav. "Nicholas Culpeper, Father of English Midwifery." *Journal of the Royal Society of Medicine* 87.9 (1994): 552–556. Print.
- Upton, Rebecca L. "'Infertility Makes You Invisible': Gender, Health and the Negotiation of Fertility in Northern Botswana." *Journal of Southern African Studies* 27.2 (2001): 349–362. Print.
- Walker, James. *An Inquiry into the Causes of Sterility in Both Sexes; with Its Method of Cure*. Philadelphia: E. Oswald, 1797. Print.
- Weschler, Toni. *Taking Charge of Your Fertility: The Definitive Guide to Natural Birth Control, Pregnancy Achievement, and Reproductive Health*. 10th Ann. ed. New York: Collins, 2006. Print.