An Instrument of Gender:

Re-evaluating the Role of the Male-Midwife and the Lying-in Chamber in Seventeenth and

Eighteenth Century England

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"Any genuine concern about the implications of such a culturally distorted science-based civilization, or about the role of women within it, demands an explanation. For the male identity of science is no mere artifact of sexist history; throughout most of its evolution, the culture of science has not simply excluded women, it has been defined in defiance of women and their absence....how did so strange a scientific culture emerge, one that proclaimed so boldly the power of the species while at the same time shrinking in horror from half the species?"-David Noble¹

Discussion on experimentation during the advent of science by learned men in the seventeenth and eighteenth-centuries in England has garnered significant research by both historians and literary theorists. Such research has attempted to address not only the implications and significance of the physical instruments within the scientific community, like that of Robert Hooke's microscope and Robert Boyle's air-pump, but they have also examined the physical space(s) in which experimentation and instrumentation were used.² As a result, instruments, and the places where they were utilized, have been important topics of discussion for understanding what social-historian Steven Shapin has called, the *house of experiment*.³

The *house of experiment* has only one gendered understanding of experimentation; the male's. Gender and its' relationship within science has long been a significant focus of historians of science, like Londa Schiebinger, who has attempted to situate the role of women within the origins of modern science and medicine. However, the role of gender, instrumentation, and the space of experimentation, have yet to be closely examined and understood within the larger context of gender relations as they pertain to science and medicine in early-modern England.⁴

The feminist-anthropologist and literary theorist, Donna Haraway, has contended that experimentation and the use of instruments, like that of Boyle's air-pump, helped to create a scientific space that enabled "the air-pump [to become] a technology of gender at the heart of scientific knowledge" by proxy of its sole use by men within a fundamentally male space. Moreover, she has argued that "it was the general absence, not the occasional presence, of women of whatever class...that gendered the experimental way of life in a particular way."⁵ 'A particular way' that, according to Schiebinger, has attempted to "distance science from women and the feminine."⁶ Female distance from science, as this essay will argue, was not only ideological, but was also physical. To mirror Haraway's sentiments, understanding the spatial relationship between both men and women in regards to science, medicine, and instrumentation is important as spatial practices of the sciences enables further understanding of gender relations in early-modern England.

What then, is the best approach to understanding the relationship between both men and women as it pertains to (1) physical space, (2) instrumentation, and (3) science and medicine? In what ways did these three separate, but often contingent, aspects of the "experimental way of life" shape the gender relations of the seventeenth and eighteenth centuries? These questions are best answered by further examining the relationship of gender within the history of science and medicine, and paying particular attention to the role that the forceps, played in gender relations not only between men and women, but also between midwives and male-midwives. The decision of choosing forceps as an instrument of science and medicine is due, in part, to their relation not only to the lying-in chamber (a solely female space), but also their relation to the female body. The goal of this essay is to treat, like Haraway has with Boyle's air-pump, the forceps as a "technology of gender."⁷

By focusing on the forceps as a technology of gender, I will argue that they were indeed the "key [in]to the lying-in room."⁸ While the historian Adrian Wilson has argued adamantly that the forceps did not enable the male practitioners of early-modern England to enter into the lyingin chambers of women; thus minimizing and limiting the role of women within medicine, this essay will argue the opposite. Like the air-pump, the forceps helped to separate men and women, while simultaneously allowing men to assert themselves and science within the art of midwifery. By viewing the forceps as a technology of gender, it is clear that they also served as a technology of power. Therefore, the forceps enabled male access into a female space; the women's lying-in chamber.

Prior to the creation and use of the forceps, in seventeenth-century England, the process of childbirth and midwifery was solely administered by women in a fundamentally private space known as the lying-in chamber. In a room solely occupied by women, where men were not allowed to enter, the mother-to-be, shortly before her expected time of giving birth, would surround herself with women she knew. Known as god-siblings (and referred to as 'gossips' by men), these women would have either been close relatives, friends, or neighbors of the pregnant mother. Their assistance provided the essential care to the mother, and was vital while the midwife performed her duties of delivering a healthy child. With the absence of men, the midwife had total control and authority over the process of the delivery.

Usually older and commonly referred to as "Grave Matrons," midwives were usually trained by currently practicing midwives, known as "Deputy Midwives," before they could obtain their own license.⁹ The process of licensing, however, was not facilitated or administrated by any medical institutions, such as the Royal College of Physicians. Instead, the process of receiving a license was controlled and regulated by ecclesiastical powers, usually within a parish or diocese.¹⁰ Acquiring a license was not easy and it was expensive. The midwife in training had to prove to the ecclesiastical authorities of her parish that she was worthy and capable of performing the art of midwifery independently, and was required to substantiate her claims by relying on another midwife (such as a Deputy Midwife) to vouch for her skills under oath.¹¹ Midwifery was a network of women, whose practice was legitimized through ecclesiastical powers. Once she was awarded the license, the midwife was then required to pay up to £2 (a very high cost) before she was permitted to practice.¹² Additionally, the parish or diocese required that practicing midwives maintained their licenses by paying an annually required 'inspection' and 'visitation' fee.¹³ The process of becoming a licensed midwife was not only difficult, but also costly; and once licensed, a midwife was responsible for finding her own cliental.

The techniques and skills of the midwife, culminated by experience and passed down from the experienced, were numerous. Covered in oils and liniments, the hands of the midwife were the essential tools by which the midwife used to draw forth the child.¹⁴ Used for entering the body, guiding, and ultimately safely pulling children out of the womb; her hands not only brought the infant into the world, but were meant to assuage the pain of the mother. The famous midwife Jane Sharp, whose work, *The Midwives Book. Or the Whole Art of Midwifery*, printed in 1671, insisted that the midwife be sure to lather the mother's genitals with duck fats and almond oil as to prevent pain and induce labor.¹⁵ Once the child breached, the midwife drew forth the child, took care of the after-birth, and cut the umbilical cord. All of this was done with the midwives hands. The child, once cleaned and swaddled by the midwife, was presented to the mother.¹⁶

The lying-in chamber, filled with its' gossips, midwife, midwives in training, and the mother-to-be was a private space only occupied by women. Childbirth was a "secret, private

affair, left to the management of women alone," and was performed in a closed off space away from the public and men.¹⁷ So, how and why did the lying in chamber come to be occupied in the early-eighteenth-century by men? Moreover, we must ask the same question that Steven Shapin has asked regarding experimental space; "What were the formal conditions of entry" to the lying in chamber by men?¹⁸

Literary theorist, Elizabeth Harvey, has argued that the first "invasive male" activity into the solely female space of midwifery resulted from the vernacular works that had been written and printed in the early-sixteenth and seventeenth-centuries by male authors, like Rosselin, whose famous *The Byrth of Mankynde*, otherwise named the Womans booke, ultimately catered to a male audience and undermined the knowledge of midwives and women.¹⁹ Adrian Wilson has argued that in the seventeenth-century there were numerous paths by which a male practitioner was able to access the cloistered room.²⁰ The most important being that of the "emergency call," which could be made by women within the lying-in chamber who "sent for [the male practitioner] only after some serious difficulty had arisen" during the labor.²¹

In the case of emergency calls, the midwife or any one of the gossips could be responsible in seeking out a nearby physician during a difficult birth. Wilson has contended that during the seventeenth-century most of the emergency calls that required the presence of a male were for obstructed births. These complicated cases usually resulted in the surgical perforation of the skull of a fetus, ease the delivery, and providing safety for the mother. Known as a craniotomy, the physician was likely to use a "sharp hook or crotchet" to cut into the infants skull, providing ease for the mother, and thereby allowing the physician the ability to remove the child. In almost every case in which this procedure was done, the child died.²² Complicated

births that involved craniotomies, however, Wilson argues, were very rare, and he contends that they were not common enough to allot for how physicians became male-midwives.²³

The historian Lisa Cody, however, has argued that while "most scholars have long emphasized how men became midwives via emergencies in childbirth, there was another, equally important route to female clients that ultimately led to obstetric practice" and the lying-in chamber.²⁴ Cody's work reveals that while emergency births relied on barber-surgeons, midseventeenth-century physicians also began "specializing in gynecology." Overtime, this allowed them, she argues, to enter the lying-in chamber as knowledgeable practitioners specializing in obstetrics and women's health.²⁵ Ultimately, as physicians themselves became ever increasingly interested in women's health and childbirth, they became increasingly more focused on what took place inside the lying-in chamber by the end of the seventeenth-century.²⁶ It should be noted that Jane Sharp, as early as 1671, wrote, "the best Learned men will grant...when they are forced to borrow from us the very name they practice by, and to call themselves Men-midwives." This passage not only suggests that Sharp was adamant that midwives were the "natural authorities"²⁷ over childbirth, but it also reveals that there were at least a number of cases in which men were a part of deliveries, and therefore, were permitted inside the lying-in chamber as early as 1670.²⁸

Furthermore, Cody's work has revealed that by the 1670's, the Royal Society's publication of *Philosophical Transactions* became more focused on "articles published on reproduction [that] addressed embryology, microscopic observations of the sperm, insect eggs, or more complex anatomical experiments."²⁹ As a result, the society began paying less attention to the actual processes of childbirth and delivery. By shifting attention to generation and reproductive knowledge, childbirth became scientific venture that could only be done and known

by learned men. This meant the exclusion of women from the discussion, as childbirth became a topic of reproduction and was viewed through the lens of science.³⁰ Knowledge that had once been "private, domestic, marital...and deeply hidden, [in the] interior recesses of the body...[the Royal Society now] helped to transform reproduction into a public topic that men could engage and master."³¹ The secrets of reproduction solely became the territory and domain of learned men and natural philosophers. While it can be argued that the experiments performed by the Royal Society "did not directly affect the midwife's access to or authority over childbirth," the Royal Society's interest in reproduction nonetheless created a dichotomy that placed preference for and emphasis on male knowledge over women's.³²

Another way in which men began to enter into the lying-in chamber was with the invention and implementation of a new medical instrument; the forceps. This new instrument changed the ways by which midwives performed how children were delivered. In 1673, just two years after the printing of Sharp's *The Midwives Book*, Hugh I (1620-1720), the son of Dr. Peter Chamberlens (1601-1683), had re-petitioned the Crown of England, as previous generations of his family had done, to patent an instrument by which his family had gained much notoriety for as practicing male midwives. The Chamberlen family, four generations of male midwives (roughly 1620 to 1730), had kept their instrument a secret, only passing the knowledge of it down to their male heirs. In 1673, however, Hugh I had announced that if "a child that comes right, and yet because of some difficulty or disproportion cannot pass" out of the mother, he and his family "had long practiced a way to deliver women...without any prejudice to them or their infants; tho all others...do, and must endanger, if not destroy one or both with hook."³³ The goal of the Chamberlen family was to establish institutional and medical claims to the practice of midwifery, which was, as discussed, only facilitated by ecclesiastical powers.

Hugh I's claim to the King stated that he and his family had come to master a skill that allowed them to deliver an obstructed child that did not require a craniotomy. Hugh I wrote,

"to offer an apology for not publishing the secret I mention we have to extract children without hooks, where other artists use them, viz. there being my father and two brothers living, that practice this art, I cannot esteem it my own to dispose of, nor publish it without injury to them."

He later continued:

"to prevent the loss of 2,100 or more children yearly...by confiding his particular secret to two or more discreet persons in each country of England...the King being supposed to lose £10 by the loss of each subject and the public 100 times as much."³⁴

Hugh I never mentioned what the secret was. Whether or not the Chamberlen's secret was an instrument or a technique was not noted in the petition that was ultimately rejected by the King.³⁵ Fourteen years later, in an attempt to once again establish presidence within the practice and regulation of midwifery, he petitioned the College of Physicians of London. However, Chamberlen was again rejected.³⁶ This time, however, the family was met with opposition from not only the College of Physicians, but female midwives who had also petitioned against the Chamberlen's involvement in the art.³⁷

How then did the forceps become a key by which men were able to gain access into the lying-in chamber if neither the King nor the College of Physicians of London accepted either of the petitions promoted by the Chamberlen family? Wilson has argued that "until the 1690's, there is no indication that anyone outside the Chamberlen family possessed the forceps."³⁸ The only other individual within England who used the forceps outside of the Chamberlen dynasty was a physician, and friend of Hugh I, by the name of James Douglas.³⁹ His interest in obstetrics

ironically led to his directed use of the forceps, by Hugh I himself, which ended shortly thereafter given that Douglas was unable to correctly use them.⁴⁰

By 1720, however, proceeding Hugh I's death, his son Hugh II (1664-1728) found that selling the forceps to other male midwives was more lucrative than attempting, and failing, at petitioning the College of Physicians. Therefore, Wilson has concluded that "all the English forceps had come from Hugh Chamberlen II, the last surviving member of the Chamberlen dynasty."⁴¹ At the age of 56, Hugh II was left no choice but to seek out a lucrative venture in selling the family secret. He founded buyers across England; from Essex, Oxford, Middlesex, and London, Hugh II sold his forceps to already practicing surgeon-barbers and male midwives. By 1733, the forceps were patented by male midwives and physicians, for use during childbirth, as an instrument of obstetrics.⁴² Furthermore, unlike Douglas, who was not properly trained by Hugh I to use the forceps, Hugh II had, once he began selling his forceps, offered "as part of the deal…a period of sustained instruction in their use."⁴³ Shortly after the end of Hugh II's life, the forceps became an instrument not only synonymous with childbirth, but also male midwifery.⁴⁴

More strikingly, Doreen Evenden has recorded that during the same year that Hugh II began to sell the family secret to other male midwives throughout England, the ecclesiastical licensing system, by which women became midwives, also began to break down.⁴⁵ As a result, in 1720, the very system that had provided legitimization through the process of paid dues and licensing to midwives deteriorated. Evenden has suggested that while many historians have linked the demise of midwifery licensing to the overall decline of the Church's power, evidence *actually* "indicates less a decline in power than a changing attitude toward the role of the Church in the licensing of midwives."⁴⁶ While the Church's licensing of midwives was not necessarily the most central aspect to the experience and skills of women who had practiced the art, it was

certainly critical for their societal legitimization as a "credit of the traditional profession."⁴⁷ For these reasons, women paid their dues, purchased their licenses, and attended their visitations, not simply to prevent excommunication from the Church, but also to maintain their legitimization and status within society. Evenden has argued that "by the 1750s midwives' traditional, practical skill proved no match for the claims of the male midwife, waiting in the wings with his shiny instruments and promises of 'scientific expertise."⁴⁸

As the licensing of female midwives by the Church disappeared, the 1730's saw an increased rise in the practice of male midwifery. Surgeons, apothecaries, quacks, and even physicians took to establishing themselves as male midwives. In search of patients in a new and very lucrative medical marketplace, male midwives sought to establish their practices with the hope of gaining wealth. For some men, like surgeons, this new "untapped, pseudo-medical arena" provided the perfect opportunity for building and maintaining a successful career in the health care system of England.⁴⁹ The changing role of women within midwifery and their growing absence from the practice in general resulted in more more consequences than simply unemployment.⁵⁰

Ultimately, the implementation of the forceps in the late seventeenth and early eighteenth centuries served as a technology of gender that allowed for men to not only gain access to the lying-in chamber, but also allowed them physical entrance into the female body. No longer was there a need for the oiled hands of the midwife. With the rise in scientific instruments and experimentation that became of interest to the Royal Society in the 1660's, the forceps enabled men to assert their scientific domain within a place had been strictly female. The forceps allowed for the male-dominated field of science and experimentation to not only enter the physical space of the lying-chamber, where men of science and medicine would lay claim over; but the forceps

would also allow for men to lay claim and knowledge over the female womb, and ultimately her body.

The forceps, then, re-inverted the lying-in chamber as a place that not only enabled men's presence, it deemed their presence necessary. For this reason, the lying-in chamber became a place of science and medicine, and by proxy, a place that belonged to men. The forceps imitated the hands of the midwife. They allowed for distance, instrumental precision, and of course, it allowed for the art of midwifery to become a medical profession by which men could define and redefine their careers as practitioners.⁵¹ The lying-in chamber also became a place where men could define, with the help instruments, nature. The womb, the female body it was attached to, and the place in which it was examined was to be re-defined according to science.

Similar to Shapin's article on the house of experiment, to which he has outlined in the "Rights of Passage" into the experimental space of Gresham College, the ability to enter places of experimentation really relied on one factor; the status of being a gentleman.⁵² More importantly, what Shapin's article highlights is the process by which experimentation (knowledge making) is conducted, how it is tried, showed, and ultimately discussed.⁵³ Each process differs based on the space in which the experimentation is done. Most likely the space in which the experiment is conducted is private. The space in which an experiment is shown is generally a private space with a public audience comprised of gentleman only. The space, in which the experiment is discussed, however, is usually done in a private setting among gentleman, but perhaps too, the discourse may have been circulated through print, like the *Philosophical Transactions*, and therefore became very public.⁵⁴

Shapin's work, in conjunction with the lying in-chamber, allows for the lying-in chamber to be viewed and analyzed, as a physical space that can be contrasted with the house of experiment. The entire process of experimentation with the forceps was carried out in the lyingin chamber. It was a space that was private, yet simultaneously had an audience; the female gossips. It was a place where the forceps could be introduced, used to conduct the delivery of an obstructed infant, and was ultimately a place that facilitated discourse on the instrument. Perhaps it can be speculated that gossips would have left after having witnessed a successful delivery through the use of the forceps and helped to spread the word of the instrument's success much like a colleague of Robert Boyle's would have done after he left Gresham College to return to France, or elsewhere, with the news of the air-pump.

The lying-in chamber was, at the same time, both private and public. Not all could enter, but the news regarding the successful use of the forceps by a male midwife could certainly exit. It was also a place that could afford "experimental trials."⁵⁵ Behind the closed doors of a lying-in chamber, the male midwife and his forceps could fail to produce a living child. On another occasion, the reverse could occur. The results could offer a living child without the need of a craniotomy. But what makes the lying-in chamber so uniquely different from that of Shapin's house of experiment is the fact that once an experiment was shown, "the status of what had been produced or witnessed was a matter for judgment."⁵⁶ It was a matter for judgment, perhaps, by the gentleman scientists who witnessed the experiment. But what about the gossips who witnessed the male midwife and his forceps? They were women, not gentleman, they had no official training in either the profession of science or medicine, and so they could not make scientific judgments. Their role as an observer was not just simply to gasp in awe when the infant was successfully drawn from its' mother, it was also to accept that what they were watching was a sheer act of man's genius display of instrumentation and medical/scientific knowledge. They were observing a display of power within the lying in chamber.

Therefore, while the forceps were an instrument of gender, they were simultaneously an instrument of power. They were a tool that not only served as a key into the female space, but they were also what prevented female midwives from re-entering that space as midwives.⁵⁷ The forceps not only opened the door, they changed the lock. They were, like the air-pump, representative of science, and science was only represented by men. It would, however, be anachronistic to assert the argument that the forceps were what displaced women in general from the sciences. While they certainly did help to prevent and diminish the role of female midwives, it should be noted that the forceps were essentially the last nail to a coffin that had been created some fifty years prior to their patent. The forceps were the last key to removing women from a space of science/medicine. They were a key that was not only used to enter the door of a solely female space, to enter the female body as well; they opened both.

What had occurred fifty years prior to the 1730's that impacted women and their relationship with science? Published in 1666, Observations upon Experimental Philosophy, printed one year prior to her visit to the Royal Society, the natural philosopher and writer, Margaret Cavendish wrote,

"For though the Muses, Graces and Sciences are all of the female gender, yet they were more esteemed in former ages, than they are now; nay, could it be done handsomely, they would turn them all from Females into Males; so great is grown the self conseit of the Masucline, and the disregard of the Female Sex."⁵⁸

Aware of the absent role of women within science and philosophy, Cavendish's play, *The Female Academy* (1667), not only echoed the problems concerning the lack of educated women, it also postulated an entire institution centered on the education of them. The opening lines of *The Female Academy* are important for a number of reasons. They reveal that an academy designed for the sole purpose of educating women was not common. Rather, for the play's character "2 Lady," a female academy was unheard of.⁵⁹ Furthermore, as briefly mentioned above, the fact that the "Ladies are instructed by old Matrons" is a possible reference to and description of the teacher's similarity to midwives who were also referred to as old matrons. Given that Cavendish would have been aware of this reference, she perhaps was alluding to the fact that midwives, who were almost always older women, would have been viewed as able teachers.⁶⁰ Finally, the criterion that both an "honourable Birth" and wealth are necessary to grant the women access into the academy echoes closely the to status of gentleman and the rights of passage of male scientists that Shapin has contended.⁶¹

In Cavendish's play, the female academy is a solely female space where young women learn and discuss "whether women are capable to have as much VVit or VVisdome as men."⁶² Unable to attend the lectures, the men become angered by their inability to enter and decide to set up their own academy adjacent to the women's.⁶³ Given the proximity of both academies, the men use their room to listen in on the ladies' lectures. One gentleman states, "For they have made that Room which they stood in to see and hear the Ladies speak in, so a place for themselves to speak in, that the Ladies may hear what they can say."⁶⁴ The one gentleman states that the men are angered with the women since there are "so many fair young Ladies [that are] so strictly inclosed, as not to suffer men to visit them in the Academy."⁶⁵

Ultimately, the ladies of the academy pay no mind to the men. Still angered by their inability to interrupt the learning of the women, the men begin to blow loud trumpets with the hopes of disrupting their lectures. They proclaim that the ladies "take no notice of the Academy of Men...they neither mention the Men, not their Discoursings, or the Arguments, or Academy,

as if there were no such Men."⁶⁶ The women then are referred to as bees that are cloistered away from the men. One of the most interesting lines comes from a man who argues that "if the men should be admitted into their Academy, there would be work enough for the Grave Matrons, were it but to act the part of Midwives."⁶⁷ The line not only suggests that the women are only good for copulating with, which is also reiterated by the referencing of the women to bees, but that the only thing that the Old Matrons would be useful for would be delivering the children. Here the Old Matrons are considered as midwives.

The ending of the play is also interesting. When the matron of the academy is confronted by the men, who argue that the women are cloistered away from them, she retorts back, "Gentlemen pray give me leave to inform you, for I perceive you are in great Error of mistake, for these Ladies have not vowed Virginity, or are they incloystred; for an Academy is not a Cloyster, but a School, where in they are taught how to be good Wives when they are married."⁶⁸ Here, Cavendish seems to be straddling a very fine line. On one hand she is arguing for the education of women, but on another she has to reiterate that the education of women must be for the sole purpose of being a good wife. Nonetheless, her play reveals that no matter how hard women try to educate themselves within a space that is solely theirs, they will always be met with the resistance of men.⁶⁹

Cavendish's play reveals a much larger issue facing women during the end of the seventeenth century in England. Her female academy, which mirrors that of the lying in chamber, was aggressively disturbed by the learned men who spent most of the play worried about disrupting the women's learning than actually learning themselves. Cavendish's play should be read as an analogy to the very real limitations concerning women and learning. The parallels between the men who drilled "a small hole into the lecture room of the female

academy" and the men who used the forceps to legitimate their entrance into the female lying in chamber are very similar.⁷⁰ Perhaps aware of the issues concerning midwives versus male midwives, Cavendish's *The Female Academy* is a useful source for understanding the broader gender issues in England. Although the play was written roughly fifty years prior to the decline of female midwives, the work can be viewed as a foreshadowing of just how invasive learned men were when it came to women's space.

Therefore, the purpose of this essay has been to articulate and show just how influential the forceps were in displacing female midwives from the solely female space of the lying in chamber. A technology of gender and power, the forceps served as a key into the lying in chamber. Like the men who set up their academy alongside the women's, the creation of the male midwife and the instrumentation he used allowed for male centered practice of science/medicine to extend into the space of women. But entrance into the lying in chamber was not enough, the forceps also allowed for men to gain entrance into the female body. Since science was solely reserved for men, the art of midwifery disappeared, the ecclesiastical licensing system diminished, and the role of the midwife became masculine.

Appendix A:

ACT I.

Scene 1.

Enter two Antient Ladies.

1 Lady.

IF you would have your Daughter virtuously and wisely educated, you must put her into the Female Academy.

2 Lady.

The Female Academy, what is that?

1 Lady.

Why a House, wherein a company of young Ladies are instructed by old Matrons; as to speak wittily and rationally, and to behave themselves handsomly, and to live virtuously.

2 Lady.

Do any men come amongst them?

1 Lady.

O no; only there is a large open Grate, where on the out-side men stand, which come to hear and see them; but no men enter into the Academy, nor women, but those that are put in for Education; •o• they have another large open Grate at the other end of the Room they discourse

in; where on the out-side of that Grate stand women that come to hear them discourse.

2 Lady.: I will put my Daughter therein to be instructed.

1 *Lady*.: If your Daughter were not of honourable Birth, they would not receive her, for they take in none but those of antient Descent, as also rich, for it is a place of charges.

2 Lady: VVhy then they will not refuse my Daughter, for she is both holnourably born, and also rich.⁷¹

Notes

¹ David Noble, A World Without Women: The Christian Clerical Culture of Western Science (Alfred A. Knopf, New York, 1992), xiv.

² See Simon Schaffer and Steven Shapin, Leviathan and the Air-pump: Hobbes, Boyle, and the Experimental Life: Including a Translation of Thomas Hobbes, Dialogus Physicus De Natura Aeris by Simon Schaffer (Princeton, NJ: Princeton UP, 1985).

³ See Steven Shapin, "The House of Experiment in Seventeenth-Century England," in ISIS vol. 79 (1988).

⁴ Londa, Schiebinger, *The Mind Has No Sex?: Women in the Origins of Modern Science* (Cambridge, MA: Harvard UP, 1991).

⁵ Donna Haraway, *ModestWitness@Second_Millennium.FemaleMan_Meets_OncoMouse: Feminism and Technoscience* (New York: Routledge, 1997), 28.

⁶ Schiebinger, *The Mind Has No Sex?*, 9.

⁷ Haraway, 28.

⁸ Radcliffe, 26.

⁹ Doreen Evenden, *The Midwives of Seventeenth-century London* (Cambridge: Cambridge UP, 2000), 50-51 and 54.

¹⁰ Ibid., 24-27.

¹¹ Evenden, 34-37.

¹² Ibid., 38.

¹³ Ibid., 42-43.

¹⁴ Lisa Forman Cody, *Birthing the Nation: Sex, Science, and the Conception of Eighteenthcentury Britons* (Oxford: Oxford UP, 2005), 37.

¹⁵Jane Sharp, The Compleat Midwife's Companion: or, the Art of Midwifry Improv'd. Directing child-bearing women how to order themselves in their conception, breeding, bearing, and nursing of children. (London: printed for John Marsall, 1725), 191.

¹⁶ Cody, *Birthing the Nation*, 36-37.

¹⁷ Adrian Wilson, The Making of Man-midwifery: Childbirth in England, 1660-1770

(Cambridge, MA: Harvard UP, 1995), 26 and Cody, Birthing the Nation, 31.

¹⁸ Shapin, "The House of Experiment in Seventeenth-Century England," 388.

¹⁹ Elizabeth Harvey, Ventriloquest Voices: Feminist Theory and English Renaissance Texts (London: Routledge, 1992), 79. Also see E. Rosselin, *The Byrth of Mankynde*, otherwise named the Womans booke (London, 1545).

²⁰ Wilson, 48. For all of the "paths" by which a man was summoned, see Adrian Wilson's section "Male Paths to Childbirth," 47-49. This section mainly addresses the types of calls and who made them when seeking after a male practitioner.

²¹ Ibid., 48.

²² Wilson, 50-51.

²³ Ibid., 53.

²⁴ Cody, 41.

²⁵ Ibid., 41-42.

²⁶ See Laurinda S. Dixon, Perilous Chastity: Women and Illness in Pre-Enlightenment Art and Medicine (Ithaca, New York 1995) for more information on physicians who engaged with women during illness.

²⁷ Cody, 41.

³⁰ See Robert Hooke's Micrographia. Published in 1665, it was the first text to utilize a new instrument, the microscope. The idea that small organisms could be viewed in great detail sparked interests in understanding reproduction.

³¹ Cody., 97

³² Ibid., 97.

³³ Wilson, 53.

³⁴ Wilson, 54. The text was provided by Adrian Wilson whose sources are; Hugh Chamberlen (trans.), *The accomlisht Midwife* (1673), "The Translator to the Reader" and CSPD, 1678, p. 610; dated "after 1676"; since it is in the State Papers of the reign of Charles II, it was probably before 1685.

³⁵ Cody, 42.

³⁶ Wilson, 55. Evenden, 178.

³⁷ Sir George Clark and A. M. Cook, *A History of the Royal College of Physicians of London* (Oxford, 1964-1972), 235-238 and 361.

³⁸ Wilson, 66.

³⁹ Cody, 44.

⁴⁰ Wilson, 68.

- ⁴¹ Wilson, 71.
- ⁴² Ibid., 69-70.
- ⁴³ Ibid., 72.

⁴⁴ Walter Radcliffe, Milestones in Midwifery and The Secret Instrument: The Birth of the Midwifery Forceps (Jeremy Norman Co, 1989), 31-33.

⁴⁵ Evenden, 174.

- ⁴⁶ Evenden., 175.
- ⁴⁷ Ibid., 175.
- ⁴⁸ Evenden, 175.

⁴⁹ Ibid., 176.

⁵⁰ Schiebinger, 109.

⁵¹ See Stanely Reiser's chapter, "The Stethoscope and the Detection of Pathology by Sound," in *Medicine and the Reign of Technology* (Cambridge UP, 1981), 23-47.

⁵² Shapin, "The House of Experiment in Seventeenth-Century England," 389.

⁵³ Ibid., 399.

⁵⁴ Shapin, "The House of Experiment in Seventeenth-Century England," 399-401.

⁵⁵ Ibid., 401.

⁵⁶ Ibid., 402.

⁵⁷ Evenden, 182.

⁵⁸ Margaret Cavendish, *Observations upon Experimental Philosophy* (London, 1666), *Introduction*, 2.

⁵⁹ See the appendix for the opening scene of the play.

- ⁶¹ Shapin, "The House of Experiment in Seventeenth-Century England," 388-389.
- ⁶² Cavendish, *The Female Academy* (London, 1667), 654.
- ⁶³ Ibid., 656.
- ⁶⁴Cavendish, *The Female Academy*, 657.

²⁸ Sharp, Introduction, 4.

²⁹ Cody, 97

⁶⁰ Evenden, 113-114.

⁶⁵ Ibid., 657.

- ⁶⁶ Ibid., 672.
- ⁶⁷ Ibid., 657.
- ⁶⁸ Ibid., 679.
 ⁶⁹ Schiebinger, 34.
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