The Sexual Politics of Microscopy in Brobdingnag

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Marjorie Nicolson's well-known analysis of the microscopical subtext of the first two sections of Jonathan Swift's Gulliver's Travels has remained the standard reading on the subject since the publication of her 1935 essay "The Microscope and English Imagination." Nicolson argues that Gulliver becomes a metaphorical microscopist in Lilliput, where he is an elevated observer of small creatures and objects, and even more so in Brobdingnag, where his scientific curiosity is complemented by a perspective that makes everyday objects appear to him in magnified detail, as if seen through a microscope.¹ As evidence, Nicolson cites Gulliver's dissection of giant Brobdingnagian wasps and his preservation of their stingers as a gift to Gresham College (The Royal Society), as well as the famous passages in which he observes Brobdingnagian anatomy in hideously magnified detail, such as Gulliver's recollection of one of "the most horrible spectacles that ever an European eye beheld . . . a woman with a cancer in her breast, swelled to a monstrous size, full of holes, in two or three of which I could have easily crept, and covered my whole body."2 For Nicolson, "A Voyage to Brobdingnag" serves as one of many examples of the covertly and overtly microscope-oriented fiction, drama, and periodical literature of the time. When read together as a genre, Nicolson argues, these texts demonstrate how the figure of the microscopist and his fascination with little worlds made large was a popular object of both satire and awe in the age of Enlightenment.

While Nicolson's broader argument about *Gulliver's Travels* that its Brobdingnag section is indicative of microscopy's appeal

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to writers outside of the scientific community-is undeniably sound, her sweeping thesis on Gulliver's role as microscopist in Brobdingnag demands some careful rethinking. For if Gulliver does play the part of microscopist in Brobdingnag as Nicolson suggests, then he is a most unusual kind: a microscopist who views things he would rather not see and then curses his magnified vision, an unwanted perspective used to observe or accompany women's bodies as often as insects and objects. Moreover, it is not Gulliver's "enlightened" mind but his puny body that endows him with microscope-like sight and compels him, helplessly and aversely, to observe not his own skin and specimens but a Brobdingnagian woman's breast "so varified with spots, pimples and freckles, that nothing could appear more nauseous," as well as insects' "loathsome excrement or spawn . . . which to me was very visible, though not to the natives of that country, whose large optics were not so acute as mine in viewing smaller objects" (pp. 130, 148). Gulliver's role in these passages and in others like them is as a miniature "seeing object," whose singular function is to view everything in magnified detail but without the power to pick and choose the objects of his magnified gaze—a power that belongs not to Gulliver but to his gigantic and predominately female owners and manipulators. All of this, I maintain, makes the Brobdingnagian Gulliver far less of an eighteenth-century microscopist than an eighteenth-century microscope, particularly when we consider that Swift's writing of the fictitious Gulliver's reduction to a small woman-manipulated object with magnified vision coincided with the actual microscope's historical "decline" from a sizeable and relatively inaccessible tool of male-dominated science for most of the seventeenth century to the portable commodity popular with middle- and upper-class women that it had become by the early eighteenth century.

If we look more closely at the wasp-stinger incident cited by Nicolson, for example, we find that Gulliver is only in a position to observe these enormous specimens in magnified detail because he happens to have been placed on a windowsill by his gigantic female owner who carries him about in a specially made box or "traveling closet," just like the popular pocket microscopes of the day.³ As if to underscore Gulliver's status as a miniature womanowned seeing object, Swift begins the anecdote not with Gulliver's search for wasp stingers to dissect and donate to the Royal Society but with his recollection of "one morning when Glumdalclitch had set me in my box upon a window" (p. 149). In fact, as the following pages will show, Gulliver holds the position of microscopist for

only a very short time-if at all-in Brobdingnag before he embarks on a three-stage devolution from microscopist to miniature microscope, to a woman-owned miniature microscope, and finally to a woman-owned miniature microscope-cum-sexual prop in the hands of the queen's maids of honor. (The maids' use of Gulliver as sexual prop has been commented upon by other critics, but without noting its microscopical subtext.)⁴ Gulliver's role as a miniature microscope and his cumulative devolution to a freakish hybrid of pocket microscope and sex toy exposes a heretofore unexplored satirical element of "A Voyage to Brobdingnag": Swift's joke at the expense of "enlightened" male scientists who imagine themselves to be far removed from the world of women and commodities but who are themselves, like Gulliver in the land of the giants, as affected by the whims of female consumption as are the newly commodified microscope and what might be called the ultimate object of female "consumption"-the dildo.

This reading of the microscopical subtext of Brobdingnag demands a reconsideration of a rarely examined chapter in the history of science, on which Nicolson herself is one of the few commentators: the microscope's shift from rare scientific instrument to popular female commodity.⁵ Although the microscope's precise date of origin and the identity of its inventor are up for debate, it is safe to say that it was invented in the early 1600s and guickly became the much-used instrument of European scientists such as Antony van Leeuwenhoek, Marcello Malpighi, and Royal Society member Robert Hooke, all of whom made their own microscopes. These men and their fellow natural philosophers were fascinated to see the inner workings of small insects under the microscope and to witness tiny creatures moving about in magnified mold, their own semen (as exemplified in Leeuwenhoek's observations of human spermatozoa under the microscope, with both the sperm and microscope presumably of his own making), and other organic matter. In 1665, Hooke published a book called Micrographia, a beautifully illustrated collection of microscopical observations, which was met with high acclaim by the close-knit English scientific community.

All this changed in the 1680s, however, when the microscope began its alleged century-long "decline" within the scientific community, during which comparatively little was written on microscopical observation outside the world of fiction. Hypotheses for the microscope's scientific decline in the eighteenth century range from the Royal Society's collective disappointment over its inability to observe atoms to the irresolvability of theological debates over whether the microscope reveals the orderliness of God's Universe or the godlessness of a chaotic Universe.⁶ In recent histories of science, the microscope's decline is most commonly ascribed to its failure to live up to Hooke's claim in the preface to *Micrographia* that "by the help of Microscopes, there is nothing so small, as to escape our inquiry."⁷ Unfortunately for Hooke, that noble aspiration would be technologically impossible until the mid-nineteenth century, when major advancements in optical glass technology facilitated the groundbreaking microbiological work of Louis Pasteur.

When considered from a purely cultural perspective, however, the century-long lapse in microscope-oriented scientific innovation and publication beginning in the late 1600s appears to be less of a "decline" than a lateral change of hands. For at precisely the same time that it seemed to have lost its high standing in the scientific community, the microscope caught hold of the English popular imagination (partly as a result of the unexpected commercial success of Hooke's Micrographia) and began to be produced in multiple English workshops for the consumption of middle- and upper-class men and women. (As J. B. McCormick notes, "the predominance of the English workshops may also be explained by the lack of guild restrictions on the industry, especially in comparison with France . . . Makers of optical instruments could belong to such guilds as the Clockmakers Company or the Spectaclemakers Company, but the rules on apprenticeship and admission were not strictly enforced. The advantages of greater freedom may have helped to stimulate the creativity of English craftsmen.")⁸ No longer the exclusive property of the male elite of the Royal Society, the microscope became a recreational tool for laypersons of both sexes who could now purchase and enjoy affordable and easy-to-use microscopes in conveniently portable small shapes and sizes produced in greater quantities for the amusement of the English public.

Evidence of women's use of these newly commodified microscopes has only recently come to light. Ignored by prefeminist histories of the microscope, the instrument's accessibility and appeal to eighteenth-century women has been taken up by two historians of microscopy, Catherine Wilson, who writes of the eighteenth century's "feminization of the microscope," and Marian Fournier, who observes "the opportunities this instrument proffered young—and not so young—ladies to participate, however far removed, in the adventure of scientific discovery."⁹ The earliest critic on record to acknowledge this cultural footnote is Nicolson herself, who traces the advent of female microscope use in Susannah Centlivre's *The Basset Table* (1705) and elsewhere in eighteenth-century drama and fiction.

The most popular and most commonly produced of this new breed of scientific instrument was the appropriately titled "pocket microscope," which belonged as much, if not more, to the world of fashion as that of science. Measuring a mere three to six inches in length and sold in elegant snuffbox-sized containers, brass, silver, and ivory models such as "Mr. Wilson's Pocket-Microscope" and Wilson's screw-barrel model (see Figure 1) were not only far more user-friendly and elegant looking than the big and bulky compound model built by Hooke (see Figure 2); they were also technologically superior, generating images much more clearly at greater magnification.¹⁰ In spite of this, the author of a recent sourcebook on eighteenth-century microscopes says of the popular pocket model, "little or no serious study was undertaken with these instruments."¹¹

Thanks to their affordability, portability, and ease of use, these dainty yet powerful instruments became fashionable among middle- and upper-class women who could purchase pocket microscopes with their pocket money, such that the pocket microscope became "very popular among the ladies" as well as the "gentlemen of the wealthier classes."12 Swift himself, as Nicolson has noted, toyed with the idea of buying one for his lover, Esther ("Stella") Johnson. He wrote to her: "I doubt it will cost me thirty shillings for a microscope, but not without Stella's permission; for I remember she is a virtuoso. Shall I buy it or no? 'Tis not the great bulky ones, nor the common little ones, to impale a louse (saving your presence) upon a needle's point; but of a more exact sort, and clearer to the sight, with all its equipage in a little trunk that you may carry in your pocket. Tell me, sirrah, shall I buy it or not for you?"¹³ Swift's charmed description exemplifies how, by 1710, these trendy little microscopes were almost as accessible and portable as the common lice they were often used to observe.

But not everyone was amused by this new development. Hooke, for one, saw a direct relation between the fashionable new pocket microscope and the contemporaneous decrease in microscope-oriented Royal Society publication. As early as 1691, he delivered a pessimistic address to the Royal Society about "the Fate of Microscopes, as to their Invention, Improvements, Use, Neglect, and Slighting." Addressing this recent "Change of Humour in Men of Learning, in so short a Time," Hooke decries



Figure 1. Mr. Wilson's pocket microscope (far left), screw-barrel microscope (upper right), and accessories, illustration from *The Description and Manner of Using Mr. Wilson's Set of Pocket-Microscopes* (London, 1706).

the microscope's devolution from a productive tool of male scientists into a miniaturized plaything in the hands of frivolous amateurs.¹⁴ Proper use of the microscope, he complains, has been "reduced almost to a single Votary, which is Mr. Leeuwenhoek; besides whom, I hear of none that make any other Use of that Instrument, but for Diversion and Pastime, and by that reason it is become a portable Instrument, and easy to be carried in one's pocket."¹⁵ In Hooke's eyes, the once prestigious microscope had been reduced to a mere toy, a literal and metaphorical shrinkage that was, for Hooke, a symbolic castration of the worst kind. The fact that these fashionable little women's toys could actually



Figure 2. Hooke's compound microscope, illustration from Hooke, *Micrographia* (London, 1665).

magnify better than Hooke's model—a detail notably absent from his 1691 complaint—must only have increased his fear that these contemptible commodities would emasculate the already endangered species of "enlightened" Englishman. (It is no coincidence, then, that the one man named by Hooke as an exemplary microscope user, Leeuwenhoek, is not English.) It is this emasculation anxiety at the heart of Hooke's lament that Swift seizes upon in his portrayal of the scientifically minded Gulliver as a helpless woman-manipulated miniature microscope in Brobdingnag.

Like Hooke, Gulliver goes out of his way to distinguish his enlightened sensibility from the materialism of the new consumer culture. In the beginning of "A Voyage to Lilliput," for example, Gulliver describes his travels as motivated by the pursuit of knowledge rather than wealth: "I was surgeon successively in two ships, and made several voyages, for six years, to the East and West Indies, by which I got some addition to my fortune. My hours of leisure I spent in reading the best authors ancient and modern, being always provided with a good number of books; and when I was ashore, in observing the manners and dispositions of the people, as well as learning their language, wherein I had a great facility by the strength of my memory" (p. 54). And yet Gulliver's account of his enlightened motives for travel suppresses the actual conditions of his voyages to the East and West Indies, the purpose of which is not to read books and scientifically observe foreign cultures but to import foreign goods for English consumption.

By the time Gulliver reaches Brobdingnag and actually becomes a small, imported commodity himself, his resemblance to an eighteenth-century pocket microscope undermines Hooke's presumption that masculine Enlightenment ideals were ever immune to the new and markedly feminine world of commodities. This, in a nutshell, is Swift's joke at Gulliver's expense. Just as in the history of microscopy itself, the role of women in the microscopical subtext of Brobdingnag only becomes apparent after the object in question has been first claimed by men, who later mark Gulliver's role as "instrument" by imagining him to be a "piece of clock-work . . . contrived by some ingenious artist" (p. 142). Early on, Gulliver is picked up by an elderly male giant who "was old and dim-sighted [and] put on his spectacles to behold me better, at which I could not forbear laughing very heartily, for his eves appeared like the full moon shining into a chamber at two windows" (p. 135). Gulliver's laughter at the sight of the bespectacled male giant calls to mind not a natural philosopher (or even a microscopic specimen) but, more accurately, a microscope staring back and up into the eyes of its enormous dim-sighted user and mocking him for his optical inadequacies.

As if in mimicry of the microscope's historical change of hands, Swift has Gulliver's philosophically curious adult male handlers retreat to the background once our small microscopelike hero finds himself in the more corporeal sphere of women and children. There, he is snatched up by a breastfeeding baby who tries, "after the usual oratory of infants, to get me for a plaything" (p. 130). From this vantage point, Gulliver is forced to observe a magnified scene of mundane domestic consumption that he finds grotesque:

I must confess no object ever disgusted me so much as the sight of her monstrous breast, which I cannot tell what to compare with, so as to give the curious reader an idea of its bulk, shape and colour. It stood prominent six foot, and could not be less than sixteen in circumference. The nipple was about half the bigness of my head, and the hue both of that and the dug so varified with spots, pimples and freckles, that nothing could appear more nauseous: for I had a near sight of her, she sitting down the more conveniently to give suck, and I standing on the table. This made me reflect upon the fair skins of our English ladies, who appear so beautiful to us, only because they are of our own size, and their defects not to be seen but through a magnifying glass, where we find by experiment that the smoothest and whitest skins look rough and coarse, and ill coloured.

(p. 130)

Whereas an actual male microscopist would not have observed the magnified "fair skins of our English ladies" unless he specifically chose to do so, Gulliver is forced to observe hideously magnified and specifically female—body parts, even and especially when he does not want to. And in contrast to the female virtuosos of Swift's day who took pleasure in viewing their own skin and hairs magnified under pocket microscopes, for Gulliver, who is in the position of a pocket microscope relegated to the status of domestic plaything, that sight is highly undesirable. Given Gulliver's microscopical point of view, the excessive gastronomic consumption in this scene—the baby's attempt to consume Gulliver, followed by the breastfeeding scene—further satirizes the devolution of the microscope and male microscopist from participants in the elite masculine world of the Royal Society to consumable objects in the world of women and children.

The misogyny used to describe such magnified female body parts is obvious and has been remarked upon by numerous critics.¹⁶ What interests me about Gulliver's disgust with enormous female bodies is the connection Swift makes between this neurosis of Gulliver's (his phobic and microscope-like gaze as a human plaything in the hands of the new female virtuoso-cum-consumer) and Gulliver's scientific pretensions. The following passage shows this particular pathology, or microscopical masculinity crisis, at work. When he is taken to visit the chief temple in Brobdingnag by his forty-foot-tall, nine-year-old mistress, Glumdalclitch (the farmer's daughter), Gulliver tries to play the part of scientific observer by assessing and measuring his minute discoveries: "I measured a little finger which had fallen down from one of these statues, and lay unperceived among some rubbish, and found it exactly four foot and an inch in length. Glumdalclitch wrapped it

up in a handkerchief, and carried it home in her pocket to keep among other trinkets, of which the girl was very fond" (p. 153). The passage shows Gulliver initially trying to play the part of the virtuoso by detecting, observing, and measuring the finger. But we find very quickly that he has merely served as the observing apparatus of his enormous mistress: first by his calling this "unperceived" treasure to her attention after finding it in a pile of trash with his magnified gaze and second by assessing it as only he can, with his unique magnified vision. In spite of Gulliver's attempts to portray himself as a scientific observer in a strange land, by the end of the sentence he cannot keep from unwittingly revealing his true standing: Gulliver as miniature microscope, like the phallic "little finger," is just a "trinket"—a commodity—in the collection of this young female virtuoso and collector. His puzzlingly inaccurate early note to the reader that he is to become the "unhappy instrument" of Glumdalclitch's disgrace (when no palpable disgrace actually befalls Glumdalclitch) appears in this light as a Swiftian pun on the word "instrument" that speaks more to this scientific man's own disgrace as an "unhappy instrument" in the hands of Brobdingnagian women (p. 134). And thus, although Gulliver begins his travels presuming himself a scientific observer, female ownership makes him akin to the new purchasable microscopes-as-playthings, the small instrument rather than the willing observer of new discoveries.

After Glumdalclitch's "instrument" is bought by the queen for 1000 pieces of gold "for the diversion of the queen and her ladies"-underscoring once more Gulliver's newly commodified and feminized status-Glumdalclitch is adopted as Gulliver's caretaker in the royal palace (p. 139). There, her new access to wealth adds to her virtuoso/collector persona a related eighteenth-century prototype: the female "shopper," with Gulliver as a magnifying seeing-object playing a key role as her shopping accessory, carried in his own special box like the pocket microscope Swift imagines purchasing for Stella: "A coach was allowed to Glumdalclitch and me, wherein her governess frequently took her out to see the town, or go among the shops; and I was always of the party, carried in my box" (p. 151).¹⁷ As Hoh-Cheung Mui and Lorna H. Mui explain in their study of shops and shopkeeping in eighteenth-century England, by the 1700s, the indoor "shop" had all but replaced the open-air market as the hub of urban consumer activity.¹⁸ Rather than merging with a larger group in an outdoor space, individual consumers would travel conspicuously by coach from shop to shop, accumulating commodities as they went.

Regarding one such shopping trip of Glumdalclitch's, Gulliver recalls: "Whenever I had a mind to see the town, it was always in my travelling-closet, which Glumdalclitch held in her lap in a kind of open sedan, after the fashion of the country, borne by four men, and attended by two others in the queen's livery. The people, who had often heard of me, were very curious to crowd about the sedan, and the girl was complaisant enough to make the bearers stop, and to take me in her hand that I might be more conveniently seen" (p. 153). Gulliver would like to explore the town as a curious and enlightened English traveler, but his will to observe and investigate is thwarted by his role as a commodified object with microscope-like vision—a pocket microscope—in the hands of a young woman-gone-shopping. As such, Gulliver sees not the attractions of the town but rather its enormous magnified inhabitants looking down at him. As Elizabeth Kowaleski-Wallace notes, in the eighteenth century, the framed spectacle of the coach window enabled female shoppers not only to display their latest commodities en route to buying more but also helped them to display themselves to the urban public, as if their own bodies were the latest fashions on display.¹⁹ The disparity between this reality and Gulliver's is quite telling. In Brobdingnag, the shoplike display of Glumdalclitch's coach window makes a commodity not of the female shopper, but rather of her miniature male accessory, the boxed-up Gulliver, Swift's enlightened man of science turned observing object and object observed. In his new role, the miniature Gulliver, like the fashionable new pocket microscope, is as much a small spectacle himself as an instrument used to produce magnified spectacles.

While Gulliver's magnified gaze makes him literally incapable of seeing "the larger picture," his status as a woman's shopping accessory and thing-that-sees, a miniature microscope, makes him unable to reflect philosophically on the new economy that subjects him to this treatment and subjects others to worse. As Gulliver recalls of another of Glumdalclitch's shopping trips:

the governess ordered our coachman to stop at several shops, where the beggars, watching their opportunity, crowded to the sides of the coach, and gave me the most horrible spectacles that ever a European eye beheld . . . But, the most hateful sight of all was the lice crawling on their clothes. I could see distinctly the limbs of these vermin with my naked eye, much better than those of an European louse through a microscope, and their snouts with which they rooted like swine. They were the first I had ever beheld, and I should have been curious enough to dissect one of them, if I had proper instruments (which I unluckily left behind me in the ship) although indeed the sight was so nauseous, that it perfectly turned my stomach.

(pp. 151-2)

On this excursion of Glumdalclitch's, Swift has Gulliver vacillating between one state of scientific emasculation—as an eager virtuoso deprived of his tools ("I should have been curious enough to dissect one of them, if I had proper instruments")-and another, as a former man of science shrunken to the stature of a portable object with a magnified gaze, like that of the pocket microscope, more intense than that of most European microscopes ("I could see distinctly the limbs of these vermin with my naked eye, much better than those of an European louse through a microscope," etc.). Overwhelmed by the magnified image before his eyes and reduced to a woman-owned seeing-object with magnified vision, Gulliver is incapable of going beyond his purely sensory response (describing the sight as "nauseous") and responding to that visual image on an "enlightened" philosophical level as well: by, for example, reflecting not only upon the particulars of the lice themselves (as a natural philosopher would do) but also upon the socioeconomic condition of the people upon whom these enormous insects live (as an economic philosopher would do). In the philosophical terms of the English Enlightenment, Gulliver's reduction to an objectified thing-that-sees makes him incapable of doing little more than seeing, unable to take the crucial step that John Locke calls the transition from "perception" (which is purely sensory) to "reflection" (which is intellectual), and therefore unable to see the larger visual and philosophical picture.²⁰ And thus, this oblivious seeing-object, in the hands of an enormous modern-day female consumer and incapable of philosophical reflection, is so busy unreflectively perceiving "minute bodies" (Hooke's term for microscopic specimens) that he cannot even realize that he is one himself: a pocket-microscope-as-miniature-spectacle.²¹ This, Swift jokes, is the imagined philosophical and cultural predicament of the "serious" eighteenth-century male microscopist, overcome and seemingly objectified by the emasculating and feminine consumer culture in which he and his instrument have become helplessly immersed.

The enlightened Englishman's metaphorical reduction to the position of a pocket microscope-a hyperperceptive but astonishingly unreflective female commodity—is apparent not only in Gulliver's microscope-like gaze and status but also in Swift's use of imagery of gastronomic female consumption to characterize Gulliver's plight.²² While Swift makes Glumdalclitch a female virtuoso and specimen-collector-turned-shopper, he makes the queen—in the eves of Gulliver-as-seeing-object—a voracious eater magnified to misogynistically grotesque proportions who almost consumes Gulliver orally after having exchanged him economically (having recently purchased him for those 1000 pieces of gold). As Gulliver recalls, during his first meal at the royal palace, the queen "took up at one mouthful as much as a dozen English farmers could eat at a meal, which to me was for some time a very nauseous sight. She would craunch the wing of a lark, bones and all, between her teeth, although it were nine times as large as that of a full-grown turkey; and put a bit of bread in her mouth, as big as two twelve-penny loaves" (p. 145). Swift has Gulliver frequently invoke the sensory (as opposed to reflective) word "nauseous" to describe this and other magnified images in Brobdingnag not only to reveal the neurotic depths of Gulliver's misogyny, but also to show how male nausea can be used as a pathetic countermeasure against the perceived threat of female consumption. Swift has Gulliver associate these magnified acts of female consumption with the act of "throwing up"-the opposite of and antidote to the act of gastronomic consumption. Gulliver's own misogyny-induced nausea is thus characterized as a comically futile psychic defense mechanism against the female consumption that has the capacity to reduce not only scientific instruments but also enlightened Englishmen themselves to mere playthings with extreme magnified vision.

Swift completes Gulliver's devolution from ostensibly enlightened Englishman to a pocket microscope-like object of female consumption by placing him in the hands of the queen's maids of honor, who employ him as a sexual prop. As Gulliver recalls, the maids of honor "would often strip me naked from top to toe, and lay me at full length in their bosoms; wherewith I was much disgusted; because, to say the truth, a very offensive smell came from their skins; which I do not mention or intend to the disadvantage of those excellent ladies, for whom I have all manner of respect; but I conceive that my sense was more acute in proportion to my littleness" (p. 157). Horrified by the magnified image before him, Gulliver observes their "naked bodies, which, I am

sure, to me was very far from being a tempting sight, or from giving me any other emotions than those of horror and disgust . . . when I saw them near, with a mole here and there as broad as a trencher, and hairs hanging from it thicker than pack-threads; to say nothing further concerning the rest of their persons" (p. 158). The "prettiest" giantess, adds Gulliver, "would sometimes set me astride upon one of her nipples, with many other tricks, wherein the reader will excuse me for not being over particular. But, I was so much displeased, that I entreated Glumdalclitch to contrive some excuse for not seeing that young lady any more" (p. 158). Although Gulliver censors out of his narrative the particular "tricks" that displease him so much, Swift allows the reader to imagine that this enormous woman uses Gulliver-in what might be called the ultimate act of female consumption-as a human dildo, rendering Gulliver's own genitalia both physically and symbolically insignificant.²³

Swift's humorous conflation of the "dildo's eve view" and the pocket microscope in this Brobdingnagian "sex scene" is not as preposterous as it might seem. Functioning as both a pocket microscope and a phallic prop in the hands of consuming women, Gulliver's body and gaze in Brobdingnag indicate the precise point of intersection between anxieties over the popularization of the microscope and contemporaneous anxieties over the dildo. Following John Locke's belief that, in Catherine Wilson's words, "all true knowledge is acquired through ordinary unassisted sensory experience," the microscope was scorned by Joseph Addison and Alexander Pope as an unproductive "toy of the age" and a reprehensibly unnatural "artificial eye."²⁴ At the same time, the dildo, on similar grounds, was perceived by its detractors in the late seventeenth and early eighteenth century as a reprehensibly artificial penis and un(re)productive female plaything (and as contributing to what many wrongly perceived as a nationwide depopulation crisis).²⁵ While woman's appropriation of the male member (in dildo form) was seen as a threat to man's claim to his own genitalia, her appropriation and belittlement of the scientific instrument that served as an "artificial eve" was feared by Hooke as a threat to the enlightened Englishman's claim to the scientific gaze and by others as a threat to the authoritative gaze of God.26

As the final stage in Gulliver's devolution from ostensibly enlightened observer to woman-owned pocket microscope to sexual prop, Gulliver's role as a human-dildo-cum-pocket-microscope also adds a new scientific dimension to an established lateseventeenth- and eighteenth-century erotic tradition featuring sexual props as male protagonists, as in the comic-erotic poems "Signior Dildo" (commonly attributed to John Wilmot, Earl of Rochester) and the anonymous "Monsieur Thing's Origin." Like Gulliver in Brobdingnag, the male heroes of these poems are bought, sold, exchanged, and forced by their enormous female users to observe the unimaginable.²⁷ The scientific side of female sexual experimentation with newly purchased instruments is apparent in the comic-erotic poem "The Bauble, a Tale" (London, 1721). Here, the newly dildo-wielding female protagonist is characterized as a virtuoso of sorts who conducts "experiments" with her enlightening new scientific/sexual instrument:

Ten Thousand Methods [she] does explore, Experiments not known before. Invention racks, in hopes to find A Thing more pleasing to her Mind. No Philomath e'er pump'd so hard, To gain the Longitude-Reward. UNHAPPY CHLOE! Fruitless Brain! I think, says she, but think in vain.

(p. 5)

Describing Chloe as a "Philomath," the poem equates sexual curiosity with scientific curiosity, satirically portraying female dildo-users as scientifically minded virtuosos. When the talented Chloe is finally successful, she instructs other women in the art of using this "Instrument for *Titillation*," and "Teaches young Virgins, pale and wan, (without th'Assistance of a Man),"²⁸ as if this new breed of sexually insatiable, scientifically minded female consumer—as Hooke seems to have feared of the new generation of microscope user—will eventually make English men irrelevant, following Hooke's aforementioned complaint that "I hear of none that make any other Use of that Instrument, but for Diversion and Pastime, and by that reason it is become a portable Instrument, and easy to be carried in one's pocket."²⁹

In "A Voyage to Brobdingnag," Swift's satire of the parallel emasculation anxieties surrounding both sexual prop and pocket microscope is realized in Gulliver's complaint of his own objectification and irrelevance, his admission that what "gave me most uneasiness among these maids of honor . . . was to see them use me without any matter of ceremony, like a creature who had no sort of consequence" (p. 158). The key to this passage is the il-

logic of the word "see," since the miniaturized Gulliver-with his extreme magnifying gaze-could not possibly view the scenario from a vantage point that would enable him to observe the women in the act of using him. Rather, his field of vision must be limited to a magnified image of the vagina dentata that consumes him, blown up to abstraction and at the expense of "the bigger picture." It takes no stretch of the imagination to envision that such a sight would be much like one of Hooke's illustrations of organisms and objects magnified to abstraction on the pages of Micrographia. Indeed, it is not unlikely that Swift was keenly aware of how Hooke's Rorschachian depiction of a fly's eyes (see Figure 3) could take on an almost obscene new meaning when considered alongside the preceding passages from "A Voyage to Brobdingnag"-bringing the likeminded reader full circle to Gulliver's early magnified observation of Brobdingnagian flies. Swift's joke is on the enlightened male scientist of his day for whom, he suggests, the commodification, shrinkage, and "feminization" of the microscope have, metaphorically speaking, made both magnified views one and the same.

Thus, by planting such a simultaneously pornographic and microscopical image in the mind of the pornographically or gynophobically inclined reader, Swift allows us to deduce that Gulliver suppresses this magnified spectacle not just out of some generic male fear of the vagina but specifically because Gulliver's position and gaze in this scene represent the climax (so to speak) of his devolution—and that of his fellow "enlightened" Englishmen in the age of pocket microscopy—from male "giant-among-thedwarfs" to a miniature objectified pocket-microscope-like commodity in the hands of scientifically and sexually curious female "consumers."

For the remainder of his stay in Brobdingnag, Gulliver finds himself returned to the company of men, but the censored dildo incident and its microscopical subtext remain that section's primal scene. "A Voyage to Brobdingnag" ends, after all, with Gulliver's suppression of that scene and all it represents, with his return home as patriarch to his wife and daughter, whose disconcerting smallness ("My wife ran out to embrace me, but I stooped lower than her knees, thinking she could otherwise never be able to reach my mouth. My daughter kneeled to ask me blessing, but I could not see her till she arose, having been so long used to stand with my head and eyes erect to above sixty foot"), physical manipulability ("I went to take her up with one hand, by the waist"), ostensible aversion to economic and gastronomic con-



Figure 3. A fly's eyes, illustration from Hooke, *Micrographia* (London, 1665).

sumption ("I told my wife she had been too thrifty, for I found she had starved herself and her daughter to nothing"), and apparent lack of curiosity (significantly, they appear to have no interest in what he saw in his travels), counteract the fantastical "Hooke's worst nightmare" that precedes it (p. 191).

So how does this reading of Gulliver's decline contribute to our understanding of "A Voyage to Brobdingnag" and its microscopical subtext? In short, by reducing an Englishman of enlightened pretensions to a virtual microscope-cum-dildo in women's hands, "A Voyage to Brobdingnag" satirizes the misogyny behind "enlightened" English masculinity and the castration threat it projects onto the new female consumer who is imagined to have abused and belittled both the microscope and the phallus by wresting them from their original and rightful (male) owners. In this light, the Swift of "A Voyage to Brobgingnag" appears as neither misogynist nor antimisogynist per se but rather as a sexual satirist exposing the gynophobia latent in Enlightenment science's aversion to the new consumerism. And thus, Gulliver's eventual use as a sexual prop in the hands of the Brobdingnagian queen's maids of honor must ultimately be understood as an act of consumption *inextricable* from the microscopical subtext of "A Voyage to Brobdingnag." For as we have seen, Gulliver ends up as both pocket microscope and dildo in a cultural satire in which Swift has showed how these two seemingly disparate objects and subject positions have become, metaphorically speaking, and to the imagined horror of Enlightenment purists such as Hooke, virtually interchangeable.³⁰

NOTES

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¹Marjorie Nicolson, "The Microscope and English Imagination," Smith College Studies in Modern Languages 16, 4 (July 1935): 1–92. The essay was later published in Nicolson's book Science and Imagination (Ithaca: Great Seal Books, 1956), pp. 155-234. Future page citations refer to the 1935 edition. While studies of general science, the Royal Society, and Enlightenment ideology in Gulliver's Travels abound (particularly regarding section three), few since Nicolson have considered how the microscope in particular figures into Swift's scientific satire. One exception is Christopher Fox, who argues that Gulliver plays the part of a microscopical specimen in Brobdingnag ("Introduction: How to Prepare a Noble Savage: The Spectacle of Human Science." in Inventing Human Science: Eighteenth-Century Domains, ed. Fox, Roy Porter, and Robert Wokler [Berkeley: Univ. of California Press, 1995], pp. 1–30). Fox's argument adds a welcome new dimension to Nicolson's but fails to account for the physicality of the microscope, its particular status in the eighteenth century, and Gulliver's resemblance to it. Noteworthy analyses of general science in Gulliver's Travels include Frederick N. Smith on Brobdingnag and the Philosophical Transactions of the Royal Society ("Science, Imagination, and Swift's Brobdingnagians," ECLife 14, 1 [February 1990]: 100-14); David Renaker on science and satire in Laputa ("Swift's Laputians as a Caricature of the Cartesians," PMLA 94, 5 [October 1979]: 936-44); and Douglas Lane Patey, "Swift's Satire on 'Science' and the Structure of Gulliver's Travels," ELH 58, 4 (Winter 1991): 809-39.

²Jonathan Swift, *Gulliver's Travels*, ed. Peter Dixon and John Chalker (New York: Penguin Books, 1967), p. 151. Subsequent quotations from this text are from this edition and will be cited parenthetically by page number.

³ The box was also a common and inhumane method of transportation for dwarf performers in traveling freak shows (see Aline MacKenzie Taylor, "Sights and Monsters and Gulliver's Voyage to Brobdingnag," *Tulane Studies in English* 7 [1957]: 29–82). ⁴ See, for example, Paul-Gabriel Boucé, "Gulliver Phallophorus and the Maids of Honour in Brobdingnag," *Bulletin de la Société d'Études Anglo-Américaines des XVIIe et XVIIIe Siècles* 53 (November 2001): 81–98; Laura Brown, "Reading Race and Gender: Jonathan Swift," in *Critical Essays on Jonathan Swift*, ed. Frank Palmeri (New York: G. K. Hall, 1993), pp. 121–40; and Ruth Salvaggio, "Swift's Disruptive Woman," in her *Enlightened Absence: Neoclassical Configurations of the Feminine* (Urbana: Univ. of Illinois Press, 1988), pp. 77–102, 85.

⁵Nicolson writes that "in England, the period 1660–85 saw the emergence of the microscope from a stage of mere novelty into an important adjunct to the investigations of the Royal Society, then saw a period of intense enthusiasm for its possibilities, followed by a period of waning interest and of comparative disuse of the microscope among scientists, accompanied by a growing interest in the microscope among laymen" (p. 8). Later, Nicolson explains how "[f]or a time the microscope ceased to be an important scientific instrument and became the plaything of the aristocracy—most of all, of the 'ladies'" (p. 22). She also makes the point that compared with the telescope, the microscope "naturally made the greater appeal. It was . . . easily obtainable and at a price not prohibitive; it could easily be used by amateurs, and its 'discoveries' were immediate and readily intelligible. It became in a short time the ladies' toy. As contemporary advertisements indicate, commercial manufacturers found in the women of the day an important additional source of revenue; exquisite glasses were available for them, in specially prepared cases, which might easily be carried in the place of snuff-boxes; and the charming virtuosae of the day delighted in the new fad" (pp. 41-2).

⁶This fascinating topic is beyond the scope of this essay but is addressed in Marian Fournier, *The Fabric of Life: Microscopy in the Seventeenth Century* (Baltimore: Johns Hopkins Univ. Press, 1996); Catherine Wilson, *The Invisible World: Early Modern Philosophy and the Invention of the Microscope* (Princeton: Princeton Univ. Press, 1997); Christopher Herbert Lüthy, "Matter and Microscopes in the Seventeenth Century" (Ph.D. diss. Harvard University, 1995); and J. B. McCormick, *Eighteenth Century Microscopes: Synopsis of History and Workbook* (Lincolnwood: Scientific Heritage, 1987).

⁷ Robert Hooke, *Micrographia: Or, Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses. With Observations and Inquiries Thereupon* (London, 1665), p. iv.

⁸McCormick, p. 12.

⁹Wilson, The Invisible World, p. 228; Fournier, p. 8.

¹⁰ See Maurice Daumas, *Scientific Instruments of the Seventeenth and Eighteenth Centuries*, trans. Mary Holbrook (New York: Praeger Publishers, 1972), for an in-depth commentary on the English instrument-making workshops of the seventeenth and eighteenth centuries.

¹¹ McCormick, p. 41.

12 Ibid.

¹³ Swift, "November 15 1710," in *Journal to Stella*, ed. Harold Williams, 2 vols. (Oxford: Clarendon Press, 1963), 1:97.

¹⁴ Hooke, "Discourse Concerning Telescopes and Microscopes; with a short Account of Their Inventors, read in February 1691–2," in *Philosophical Experiments of the Late Eminent Dr. Robert Hooke and Other Eminent Virtuoso's in His Time* (London, 1726), pp. 257–64, 261.

15 Ibid.

¹⁶ For more on misogyny in "A Voyage to Brobdingnag" and elsewhere in Swift, see Brown; Salvaggio; Margaret Anne Doody, "Swift among the Women," in Palmeri, pp. 13–37; Felicity A. Nussbaum, "Gulliver's Malice: Gender and the Satiric Stance," in *Gulliver's Travels: Complete, Authoritative Text with Biographical and Historical Contexts, Critical History, and Essays from Five Contemporary Critical Perspectives*, ed. Fox (Boston: Bedford Books of St. Martin's Press, 1995), pp. 318–34; Nora F. Crow, "Swift and the Woman Scholar," in *Pope, Swift, and Women Writers*, ed. Donald C. Mell (Newark: Univ. of Delaware Press, 1996), pp. 222–38; Louise K. Barnett, "Betty's Freckled Neck: Swift, Women, and Women Readers," *1650–1850: Ideas, Aesthetics, and Inquiries in the Early Modern Era* 4 (1998): 233–45; and Ellen Pollak, *The Poetics of Sexual Myth: Gender and Ideology in the Verse of Swift and Pope* (Chicago: Univ. of Chicago Press, 1985).

¹⁷The relationship between these two eighteenth-century female prototypes is captured by Harriet Guest, who writes that "feminine learning is perceived with increasing insistence in the mid- to late century in a parallel relation to fashionable elegance" (*Small Change: Women, Learning, Patriotism, 1750–1810* [Chicago: Univ. of Chicago Press, 2000], p. 73).

¹⁸ Hoh-Cheung Mui and Lorna H. Mui, *Shops and Shopkeeping in Eighteenth-Century England* (London: McGill-Queens Univ. Press, 1989).

¹⁹ Elizabeth Kowaleski-Wallace, *Consuming Subjects: Women, Shopping, and Business in the Eighteenth Century* (New York: Columbia Univ. Press, 1997). For more on the advent of female consumerism in the eighteenth century, see *The Consumption of Culture, 1600–1800: Image, Object, Text,* ed. Ann Bermingham and John Brewer (London: Routledge, 1995); Lorna Weatherill, *Consumer Behaviour and Material Culture in Britain, 1660–1760* (London: Routledge, 1996); and Guest, pp. 1–94.

²⁰ John Locke, *Essay concerning Human Understanding* (New York: Penguin Books, 1974), pp. 119–23.

²¹ The name that Glumdalclitch gives Gulliver, "Grildrig"—translated by Gulliver as "what the Latins call *nanunculus*, the Italians *homunceletino*, and the English *mannikin*" (p. 134)—highlights his position in Brobdingnag as a women's prop. Paul Odell Clark, drawing from Swift and Stella's "little language," translates "Grildrig" as "*Girl-thing*" (*Gulliver Dictionary* [New York: Haskell House Publishers, 1972], p. 20).

²² As Gulliver wonders upon encountering his first Brobdingnagian, "what could I expect but to be a morsel in the mouth of the first among these enormous barbarians who should happen to seize me?" (p. 125). During the same meal with the queen, the court dwarf (arguably a stand-in for Swift himself) delights in reminding Gulliver that he is a mere morsel in the eyes of the queen by dropping Gulliver into a bowl of cream and inserting him into a marrow bone on her plate.

²³ This is, of course, a stark contrast to his adventures in Lilliput, where he uses his enormous member (much admired by the Lilliputians) to put out a fire on the queen's tiny palace.

²⁴ Wilson, "Visual Surface and Visual Symbol: The Microscope and the Occult in Early Modern Science," *Journal of the History of Ideas* 49, 1 (January–March 1988): 85–108, 103 (emphasis original); Joseph Addison, "No. 119.

Thursday, January 12, 1709," in *The Works of Joseph Addison*, ed. Henry G. Bohn, 6 vols. (London: George Bell and Sons, 1901), 2:72; and Alexander Pope, "Essay on Man":

Why has not Man a microscopic eye? For this plain reason, Man is not a Fly. Say what the use, were finer optics giv'n, T' inspect a mite, not comprehend the heav'n?

(1.193-6)

(in *The Poems of Alexander Pope*, ed. John Butt [New Haven: Yale Univ. Press, 1963], pp. 501–47). For more on Locke and microscopy, see chap. 7 of Wilson's *Invisible World* (pp. 215–50).

²⁵ See Peter Wagner, "The Discourse on Sex—Or Sex as Discourse: Eighteenth-Century Medical and Paramedical Erotica," in *Sexual Underworlds of the Enlightenment*, ed. G. S. Rousseau and Porter (Chapel Hill: Univ. of North Carolina Press, 1988), pp. 46–68, 53–4.

²⁶ See also the tongue-in-cheek manner in which the comic-erotic poem "Monsieur Thing's Origin" (Cheapside, 1722) frames the conflict between dildo and penis as a matter of "Art" vs. "Nature," and in the similarly comical disparagement of dildos as "false ware" in the anonymous 1706 poem "Dildoides" (rprt. in *Dildoides* [Kingston RI: Biscuit City Press, 1980], p. 9), which is often attributed to Samuel Butler (see A. H. De Quehen, "An Account of Works Attributed to Samuel Butler," *The Review of English Studies* 33, 131 [August 1982]: 262–77).

²⁷ Rochester, "Signior Dildo," in *The Works of John Wilmot, Earl of Rochester*, ed. Harold Love (Oxford: Oxford Univ. Press, 1999), pp. 253–7. For more on literary representations of dildos—anthropomorphic and inanimate alike—in the seventeenth and eighteenth centuries, see Emma Donoghue, *Passions Between Women: British Lesbian Culture, 1668–1801* (London: Scarlet Press, 1993); Harold Weber, "'Drudging in Fair Aurelia's Womb': Constructing Homosexual Economies in Rochester's Poetry," *ECent* 33, 2 (Summer 1992): 99–117; and Jeffrey Kahan, "Violating Hippocrates: Dildoes and Female Desire in Thomas Nashe's "The Choice of Valentines," *Para*doxa* 2, 2 (1996): 204–16. While others have hypothesized the incident's origins in *Arabian Nights* (see Sheila Shaw, "The Rape of Gulliver: Case Study of a Source," *PMLA* 90, 1 [January 1975]: 62–8, 64), it is certainly possible that Swift had read the anonymous poem "Monsieur Thing's Origin," about an émigré dildo from France who—like Gulliver in Brobdingnag, a little man in a strange land—ends up in the hands of an English queen's maid:

From hence *Monsieur* took moving to the Court, To see what Pastime there was, or what Sport: So came he to the Hand of Lady's Maid, With whom some little time our *Monsieur* stay'd She like Cade Lamb was pleas'd with *Monsieur* play'd. No sooner had she tasted of his Favour, But she embrac'd the Sweetness of his Savour; To him alone she shew'd her good Behaviour. By this time *Monsieur* having thus infus'd His Friendship in the Maid, she introduc'd Him to her kind Mistress's first Acquaintance, As a fine Thing of noted Worth and Sense: So that the Lady was to make a Tryal Of *Monsieur*'s Skill, which was without denyal The best, most pleasing thing as e'er she felt, Ever since she near to the Court had dwelt.

(pp. 20–1)

²⁸ "The Bauble: A Tale" (London, 1721), p. 3.
²⁹ Hooke, "Discourse Concerning Telescopes and Microscopes" p. 261.
³⁰ Illustrations published by permission of Science Heritage Limited.