

**Sex, Spirits, and Sensibility:
Human Generation in British Medicine, Anatomy, and Literature, 1660-1780**

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September 2013

Abstract

This thesis explores the physiological idea of animal spirits in relation to nerves, sex, and reproduction in the culture of sensibility. That physiology held the sex organs of both females and males to be exceptionally sensitive parts of the body that profoundly affected individuals' constitutions and minds. Sexual sensations, desires, volition, and behaviour depended upon animal spirits and nerves. A central concern in this perception of the body and mind was the conflict between rationality from the intellectual will and sexual feelings from the genitalia. The idea that the body and mind interacted through animal spirits became influential in Georgian culture through anatomical and medical writings, teachings, and visual displays, but also through its resonance in literature about sensibility.

This research predominantly draws upon material and print cultures of medicine, anatomy, and literature from 1660-1780. The analysis highlights the roles of gender, markets, literary modes, scientific practices, visual demonstrations, medical vocations, and broader social and political discourses in conceptions of the body and mind in relation to sex and reproduction. Ultimately, this study fleshes out the sensible and sexual body, which cultural and literary historians have frequently referred to, and emphasizes how the organs of generation commanded particular attention and exercised special influence.

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Acknowledgements

Doctoral students accrue countless debts. Of those that I owe, many are to my family and close familiars, who have given indispensable support. My fellow graduate students and the staff at the University of York offered regularly good company both socially and intellectually. York's Humanities Research Centre and the Centre for Eighteenth-Century Studies provided many of the exceptional learning and sharing opportunities I enjoyed. I am also obliged to the British and Canadian Societies for Eighteenth-Century Studies for many wonderful opportunities. My understanding of the eighteenth century has been enlarged greatly by the papers, discussions, and support given at those societies' conferences. Other indispensable resources have been the libraries at the universities of York, Leeds, and Alberta, where I have spent many days reading, writing, and honing a scholar's slouch. Much of the visual material in this thesis was made available by the staff at the Hunterian Museum, London, and a generous grant from the Scientific Instrument Society. I gratefully acknowledge my doctoral funding from the University of York's Overseas Research Scholarship and Canada's Social Studies and Humanities Research Council.

I kindly thank my committee members, Catriona Kennedy and Hannah Greig, and my internal and external examiners for the expertise, insight, and time that they have invested into my research. I would not have arrived at this particular line of historical inquiry without the continued good influence of Ray Stephason. Doubtless, I am most indebted and grateful to my supervisor, Mark Jenner. He has lent me an unrepayable amount of his effort, guidance, and knowledge.

Author's Declaration

This work is entirely my own. It has not been submitted previously for examination to The University of York or to any other institution. Material contained in this thesis has been presented in fourteen different conference and seminar papers. Parts of chapter two appear as “A Bit Exposed: Displays of Male Genitals” in *The Secrets of Generation: Reproduction in the Long 18th-Century*, edited by Ray Stephanson and Darren Wagner (Toronto: University of Toronto Press, forthcoming). Parts of chapter two were also published as “Arousing Applications: Syringes and Anatomical Preparations of Genital Organs in the Long Eighteenth Century,” *Bulletin of the Scientific Instrument Society* 113 (2012): 4-9.

Dedication

To the many fine brewers of coffee and liquor, for keeping me in good spirits.

The pleasure which we receive from History arises in a great measure from the same source with that which we receive from Romance. It is not the bare recital of facts that gives us pleasure. They must be facts that give some agitation to the Mind by their being important, interesting or surprising.

John Gregory, *A Comparative View of the State and Faculties of Man* (1765)

Introduction

It was a fine still evening in the latter end of the month of May—the crimson window curtains (which were of the same colour as those of the bed) were drawn close—the sun was setting and reflected through them so warm a tint into the fair *fille de chambre*'s face—I thought she blush'd—the idea of it made me blush myself—we were quite alone; and that super-induced a second blush before the first could get off.

There is a sort of a pleasing half guilty blush, where the blood is more in fault than the man—'tis sent impetuous from the heart, and virtue flies after it—not to call it back, but to make the sensation of it more delicious to the nerves—'tis associated.—¹

In the above excerpt, Yorick and the “fair *fille de chambre*” intimately converse, not with words, but with a characteristically eighteenth-century gesture—blushing.² Laurence Sterne's *A Sentimental Journey through France and Italy* (1768) is a collection of such episodes wherein Yorick has affectionate and seemingly polite exchanges underscored by physiological responses, which usually betray tacit sexual feelings and meanings.³ The flush of blood on their faces parallel unseen flushes under petticoats and within britches. Yorick is a man of sensibility; and, as literary scholar George Haggerty observes, “The blood that flows through the arteries of fine feeling can also enlarge the organs of sexual response.”⁴ But there is something more at play in these sensible, sexual bodies than just blood. As Yorick's episode suggests, it's the *nerves* that feel and specifically nerves filled with *animal spirits*.

This dissertation explores the role of animal spirits in eighteenth-century understandings of sex and reproduction. I argue that in the culture of sensibility, physiology of nerves, and medical discussions of *generation* ideas about animal spirits explained a powerful mutual influence between the mind and body (or brain and groin). In fact, the culture of sensibility and eighteenth-century sexuality cannot be understood without first understanding the ways in which genitalia and the mind affected each other. Sexual

¹ Laurence Sterne, *A Sentimental Journey through France and Italy*, in *The Florida Edition of the Works of Laurence Sterne*, ed. Melvyn New and W. G. Day (Gainesville: University Press of Florida, 2002 [orig. 1768]), 6: 121.

² See John Mullen, *Sentiment and Sociability: The Language of Feeling in the Eighteenth Century* (Oxford: Clarendon Press, 1988), 158. Mullen has similarly observed the importance of Yorick's conversation through gestures.

³ See Martin Battestin, “Sterne Among the Philosophes: Body and Soul in *A Sentimental Journey*,” *Eighteenth-Century Fiction* 7, no. 1 (1994), 13; Frank Brady, “Tristram Shandy: Sexuality, Morality, and Sensibility,” *Eighteenth-Century Studies* 4, no.1 (1970): 41-56.

⁴ George Haggerty, *Men in Love: Masculinity and Sexuality in the Eighteenth Century* (New York: Columbia University Press, 1999), 84.

pleasure, pain, desires, and passions were seen as instancing the common, yet profoundly influential, communications between the mind and genitals. Physiological ideas about spirits moving between the brain and groin, eliciting effects in both, responded to broader questions about *volition*.⁵ What causes sexual behaviours, especially when those behaviours go against better judgement or good reason? Is, as Sterne queried, bodily physiology “more in fault than the man,” or is there an immaterial mind implicated? Central to these questions about volition were concerns about sexual culpability, individual freedom, and human nature. Investigations into sex and reproduction, then called *generation*, responded to these questions and concerns. How were the genital and cerebral—the physical and mental—involved in such processes as arousal, making *seed*, ejaculation, orgasm, conception, gestation, and birth? Eighteenth-century medical authors concluded that both the mind and organs of generation were involved in these processes. But this dual involvement of the mind and sexual organs hinged upon the unique properties of nerves and animal spirits to relay sensations, desires, movements, and special generative material. Knowing how animal spirits worked, then, is essential for explaining the connected eighteenth-century ideas about sex, reproduction, and sensibility.

The history of spirits, generation, and sensibility involves both the medical and the literary, calling to question their relationship during the eighteenth century. The idea that there was a profound mutual influence between the brain and groin gained increasing significance or “resonance” (to use cultural historian Dror Wahrman’s term) outside of medical discussions because of the mid-eighteenth-century rise of sensibility, particularly the literature of sensibility.⁶ In the 1730s literary authors began incorporating nerve and sex physiologies into depictions of sensible individuals. Those authors also raised similar questions for medical writers: how did the genitalia, sexuality, and generation affect rational thought? Discussions about pathology, therapy, sexual crime, morality, and social behaviour frequently referred to ideas about animal spirits. New medical enquiries sought to explore and expand on how animal spirits worked in the sensible and sexual bodies that preoccupied readers and writers of sentimental literature. But medical-literary exchanges did not only occur in writing. These exchanges occurred within anatomical demonstrations, medical

⁵ Stephen Gaukroger has suggested that “for mid-century Enlightenment thinkers” sensibility was “what underlies our cognitive life.” Stephen Gaukroger, *The Collapse of Mechanism and the Rise of Sensibility: Science and the Shaping of Modernity, 1680-1760* (Oxford: Oxford University Press, 2010), 393. He further observed that a “distinctive feature of mid-eighteenth century thought is the way in which questions of cognition, morality, and civic responsibility come to be grounded in sensibility” (402).

⁶ Dror Wahrman, “Change and the Corporeal in Seventeenth- and Eighteenth-Century Gender History: Or, Can Cultural History Be Rigorous?” *Gender and History* 20, no. 3 (2008): 584-602. “Resonance,” according to Wahrman, is the measure of an idea’s cultural influence by its extent of dissemination.

practices, social discussions, and erotic cultures. This dissertation, therefore, examines these points of exchange, wherein ideas about generation and animal spirits were developed, shared, and disseminated, particularly between medical and literary cultures. Therefore, such sources derive largely from print culture, especially medical works, sensibility novels, erotic writings, and, to a lesser extent, legal accounts, doggerel, diaries, periodicals, and political tracts. These written records are supplemented by material and visual artefacts, primarily from anatomical and medical cultures, but also artistic. The following six sections in this chapter introduce major historical topics and historiographical themes that contextualize this dissertation, including generation, nerves, sensibility, sensible genitals, sex and gender, and genres. The penultimate section of this chapter introduces the subsequent chapters.

Generation

Investigations and discussions about generation often directly queried the nature of how the body and mind interacted. Although roughly equivalent to the modern sense of sex and reproduction, the meaning of generation in early modern British medicine, society, and culture has no neat historical equivalent. In a moment of humour, the Dutch natural philosopher Jan Swammerdam (1637-1680) hinted towards its meaning at that time: “Generation is the Beginning, Middle, and end of Man’s life.”⁷ His reasoning was that the beginning of life—birth—results from generation, puberty makes people “fit for Generation,” and the rest of life was spent dealing with the consequences of generation, which was often the rearing of children.⁸ Unlike modern discussions about sex and reproduction, generation in the long eighteenth century necessarily involved both the mind and body; relating them as if separate entities, but in a constant and powerful dialogue made through animal spirits. Medical and non-medical thinkers in the late seventeenth and eighteenth centuries frequently raised questions about human will, sensations, and actions within the subject of generation.

Generation was and is a slippery and mutable idea, yet it was a common and important medical topic in early modern sciences and arts. Broadly defined, generation was the begetting of individual living things, whether done sexually, asexually, or spontaneously.⁹ This process constituted a fundamental part of Nature, reflected God’s creative quality, represented national strength, and allowed for hereditary monarchy, and, as Swammerdam suggested, it was a perennial feature of early modern life. This expansive term applied to everything from the microscopic to the cosmic. It was a key theme in

⁷ Jan Swammerdam, *Ephemeris Vita, Or, The Natural History and Anatomy of the Ephemeron, a Fly that Lives But Five Hours. Written Originally in Low-Dutch*, trans. Edward Tyson (London: Henry Faithorne and John Kersey, 1681), 40.

⁸ *Ibid.*, 40.

⁹ “Generation” also referred to the creation of inanimate things, such as mineral formations; however, this usage borrows rather than broadens the meaning of “generation.”

theological discourse: God was the generative source, and one of his first commands was to “Be fruitful and multiply.”¹⁰ In specific terms, generation encompassed inheritance, seed creation,¹¹ arousal, copulation, conception, gestation, pregnancy, birth, lactation, and all body parts, substances, and conditions involved those events.¹² From the mid-seventeenth century on, generation was a recognized subject of medical and anatomical research, and numerous revisions in the science of generation were ushered in. Christian rhetoric was coupled with horticultural metaphors in early modern discussions of generation. Seed, soil, fruit, and growth had physiological meanings. Scholastic teaching represented seed as inherently progenerative, sown by males according to Aristotelian teaching or both sexes according to Galenic. The womb was soil, in which the fruit—or unborn child—was watered and fed by maternal blood and, after birth, milk. But in the era that this dissertation explores, the traditional vocabulary became outmoded and eventually relegated to less erudite texts, such as domestic medical advice manuals. Instead, written descriptions of generation incorporated terminology and principles from “chymistry,” such as *fermentation* and *perfection*. Queries about the involvement of a divine and eternal soul in conception became less common. But concerns about the effects generation had on individuals’ bodies and minds were regularly cited.

The questions posed about generation, sexuality, and the body/mind relationship occurred in connection to groups, discussions, and practices specific to eighteenth-century Britain. As scholars have shown, ideas about generation influenced several literary works, although much remains to be said about their wider social and cultural influence. Notions, theories, and researches into generation, especially concerning nerves and animal spirits, often emerged out of exchanges between different kinds of medical and non-medical discussions. Vocational changes, particularly in the early and mid-eighteenth century, and developments in print, display, and material cultures brought generation to the fore of medical and public discourse. Authors, practitioners, and healers of various kinds vied for medical authority over generation, and often by using new rhetoric and vocabulary. Issues like fertility, birth, body forms, reproductive disorders, and sexual diseases made generation a significant and lucrative specialty in medicine. Many who were highly learned and

¹⁰ Genesis 1.28, KJV. Variations of this command occurred several times in Genesis.

¹¹ A process akin to gametogenesis.

¹² Nikolai Detlef Falck gave a corpuscular description of generation: “The word generation is very extensive in itself; since every corporeal being has its existence by that act: And which again one time or other, according to the prescribed period, degenerates; or, in other words, (which is the same theory in fact) created and annihilated: but not in the sense of something to nothing, or nothing to something; but the act of transposing corpuscles, from one corporeal being, into another: For whilst we reason as naturalists, we must have a something for our foundation, and give up all chimerical nothings, for the benefit of labour-in-vain metaphysics.” Nikolai Detlef Falck, *A Treatise on the Venereal Disease...* (London: B. Law, 1772), 51.

formally trained in medicine took an active interest in and stated public opinions about issues concerning reproduction and sexuality. From its establishment in the 1660s, the Royal Society regularly discussed topics related to generation. During the course of the eighteenth century, obstetrics increasingly became the prerogative of man-midwives and physicians, rather than traditional female midwives. These vocational changes paralleled the introduction of new theories and discussions concerning sex organs and new mechanical technologies, such as forceps, crotchets, and syringes, to obstetrical practices.¹³

Many ideas about generation and animal spirits were shared among Western European medical and scientific circles; however, Britain was unique because of the long and fervent adherence to animal spirit theories and the influence of sensibility. Yet many major European centres like Bologna, Padua, Leiden, Amsterdam, Paris, and London housed anatomical research, which revolutionized understandings of generation. Using human and animal bodies, in private and public, anatomists carefully dissected, prepared, and examined substances, tissues, and organs relating to generation. In Britain, William Harvey (1578-1657) pioneered anatomical investigations into generation. As Jacques Roger illustrated, for an early modern physician to pursue research into the life sciences was to break away from the conventional interests and activities of their vocation.¹⁴ But throughout the seventeenth and eighteenth centuries, anatomical research, empirical experimentation, and public demonstration became more prominent and valued in medicine.

Esteem, often coupled with economic advantage, among intellectual, medical, and anatomical circles drove research into generation. A medical display culture emerged that often featured the organs of generation as objects of observation, experiment, and discussion. The anatomical preparation and display of genital organs conveyed a special and personal esteem to collectors within medical and lay circles from the 1660s until the 1780s. Medical investigators made numerous observations, theories, and debates, including epigenesist and preformationist embryological accounts,¹⁵ following the introduction of

¹³ For an examination of mechanistic theory in eighteenth-century generation debates, see Shirley Roe, *Matter, Life, and Generation: Eighteenth-Century Embryology and the Haller-Wolff Debate* (Cambridge: Cambridge University Press, 1981), 1-20. For the rise of man-midwifery and mechanical instruments, see I. S. L. Loudon, *Medical Care and the General Practitioner, 1750-1850* (Oxford: Clarendon Press, 1986), 85-99; Adrian Wilson, *The Making of Man-Midwifery: Childbirth in England 1660-1770* (London: University College Press, 1995); Lisa Forman Cody, "The Politics of Reproduction: From Midwives' Alternative Public Sphere to the Public Spectacle of Man-Midwifery," *Eighteenth-Century Studies* 32, no. 4 (1999): 477-495.

¹⁴ Jacques Roger, *The Life Sciences in Eighteenth-Century French Thought*, ed. Keith Benson, trans. Robert Ellrich (Stanford: Stanford University Press, 1997), 1-12.

¹⁵ In epigenesis, constituent parts of the fetus emerge from a primordial substance made of seed and supplied by the womb until a human form is completed. In preformationism, a homunculus (a microscopic fully human form) exists in the seed but only grows after male and female parental contributions are combined. See Clara Pinto-Correia, *The Ovary of Eve:*

microscopy technologies and techniques, especially in the late seventeenth and early eighteenth centuries. Throughout the eighteenth century, new medical names, descriptions, and forms of visual representation seeped into the public's awareness. Engraved illustrations of assemblages of dissected genitalia, a technique exemplified by figures 0.1 and 0.2, were visual representations of the organs of generation. Such images, as several historians have emphasized, had wide significance among the medical and non-medical. These body parts were the typical set of reproductive organs: uterus, ovaries, vagina, clitoris, vulva, penis, testicles, prostate, seminiferous vesicles, and bladder—what today is called the genitourinary tract.¹⁶ Under academic and public scrutiny, genitals came to embody new meanings. Significantly, these visual displays and new meanings referred to physiological ideas that coupled sexuality and sensibility. The organs of generation were portrayed as the most sensitive parts of the body with direct nervous connections to the mind. From the late seventeenth until the late eighteenth century, generation could not be discussed in detail without mention of animal spirits. This association of generation with the same nervous physiology underlying sensibility is what the dissertation explores.

Nerves

In the eighteenth century, nerves provided the backbone of sensibility and the face of sentimentality. But, serious investigations into nerve anatomy and physiology began in the mid- to late seventeenth century. These investigations were significant because they raised the profile of animal spirits as the intermediate between body and mind, and as a central player in generation. As John Sutton suggests, “there was a new reliance on animal spirits in seventeenth-century physiological explanation.”¹⁷ In 1664, Thomas Willis published *Cerebri Anatome*, a treatise examining the brain and nervous system. That work included a schematic of the nerves in the body similar to the first of the four Evelyn anatomical tables, created by Giovanni Leoni d' Este and Johann Vesling in Padua during

Egg and Sperm and Preformation (Chicago: University of Chicago Press, 1997) for a fuller discussion of, and a biographical examination of the leading figures involved in, seventeenth- and eighteenth-century epigenesis and preformation. See Matthew Cobb, *The Egg & Sperm Race: the Seventeenth-Century Scientists Who Unravelled the Secrets of Sex, Life and Growth* (London: Bloomsbury Publishing, 2006) for a general survey of the topic.

¹⁶ The breasts, although not included in figure 4, were also considered among the organs of generation. Likewise, this dissertation does not give breasts their due consideration. For a fuller examination of breasts in eighteenth-century discussions of generation, see Ruth Perry, “Colonizing the Breast: Sexuality and Maternity in Eighteenth-Century England,” *Journal of the History of Sexuality* 2, no. 2 (1991): 204-234; Toni Bowers, *The Politics of Motherhood: British Writing and Culture, 1680-1760* (Cambridge; New York: Cambridge University Press, 1996); Sonja Boon, “Mothers and Others: The Politics of Lactation in Medical Consultation Letters Addressed to Samuel-Auguste Tissot,” in *The Secrets of Generation: Reproduction in the Long Eighteenth Century*, eds. Raymond Stephanson and Darren Wagner (Toronto: University of Toronto Press, forthcoming).

¹⁷ John Sutton, *Philosophy and Memory Traces: Descartes to Connectionism* (Cambridge: Cambridge University Press, 1998), 44.

the 1640s and presented to the Royal Society in 1667 and still viewable today. That Evelyn table is a full-body nervous system dry mounted on a wooden board (fig. 0.3), a display remarkably similar to the illustration of spinal nerves that Christopher Wren had done for Willis's treatise.¹⁸ The rise of the anatomical exploration and visual representation of this neural network permeating the body and connecting to the brain paralleled the renewed attention to animal spirits. Crucially, the circulatory model propounded by Harvey was readily applied to the nerves and animal spirits. Therefore, people perceived animal spirits—and consequently sense, sexuality, and reproduction—as a system or economy of fluids. The historian of reproduction Angus McLaren claimed that spermatoc economies were characteristic of nineteenth-century physiologies.¹⁹ However, late seventeenth- and eighteenth-century medical writers described how losing sperm meant draining animal spirits, which debilitated mind and body. The supply, deficit, production, and consumption of nervous juices were central to eighteenth-century perceptions of generation.

There are several figures whose endeavours or writings came to represent important facets in the intellectual development of nerve anatomy and physiology, and which individuals are referred to throughout this thesis. English anatomists such as Willis (1621-1675), James Drake (1667-1707), William Cowper (1666-1709), and Thomas Gibson (1647-1722) published texts adorned with illustrations of nerves. Notable physicians and surgeons like George Cheyne (1671-1743), Alexander Monro *primus* (1697-1767), and David Hartley (1705-1757) expanded on medical and physiological nerve functions. On the continent, physicians and natural philosophers, such as Isbrand van Diemerbroeck (1609-1674), Thomas Bartholin (1616-1680), Nicolas Malebranche (1638-1715), Antoni van Leeuwenhoek (1632-1723), and Herman Boerhaave (1668-1738), introduced major ideas relating to nerves, animal spirits, and generation. As the historian of science Thomas Broman suggests, “Medical theory in London did not differ markedly from what was being taught elsewhere.”²⁰ However, in London the details and implications of nerve and generation theories existed in different medical, literary, and social contexts, with the greatest difference being how those theories participated in the culture of sensibility.

There were several important bridges that allowed medical/anatomical ideas about nerves to enter the construction of the culture of sensibility. One of these was a student of Willis's in Oxford, John Locke (1632-1704). In 1689, Locke published an influential

¹⁸ That table is now displayed with the three other Evelyn tables at the Hunterian Museum, London.

¹⁹ Angus McLaren, introduction to *Impotency: A Cultural History* (Chicago: University of Chicago Press, 2007), xvi.

²⁰ Thomas Broman, “The Medical Sciences,” in *The Cambridge History of Science*, vol. 4: “Eighteenth-Century Science,” ed. Roy Porter (Cambridge: Cambridge University Press, 2003), 4: 465.

philosophical examination on sensation and thought, *An Essay Concerning Human Understanding*, which described mental operations in physiological terms.²¹ Fancy, association, imagination, sense, and sympathy were readily explicated in terms of animal spirits and nerves. Although many individuals strained their eyes and endlessly fiddled with experiments attempting to discover how nerves worked, little was definitively proven. Unlike blood vessels, the internal structure of nerves could not be seen by the naked eye or assisted by microscope, nerves were not readily injected or inflated, and most actions of nerves could not be observed *in vivo*. Therefore, multiple theories about nerves were proposed throughout the late seventeenth and eighteenth centuries, with animal spirits being the most accepted and influential understanding.

A continuation and blend of Cartesian body mechanics,²² Vesalian-type anatomical inquiry, and Harveian physiology,²³ late seventeenth- and early eighteenth-century medical authors described an “animal economy” involving nerves and animal spirits bridging the mind/body gap. Indeed, literary historian George Rousseau emphasizes the significance of this jump from earlier humoral theories to this nerve physiology, deeming it “a quantum leap.”²⁴ This new nerve physiology progressively broke away from older, conventional notions about humors, passions, and vapours, found in Aristotelian, Galenic, and Hippocratic traditions.²⁵ Although the paradigms of humors and temperaments continued to be used throughout the seventeenth and eighteenth centuries, this dissertation examines specifically the physiology of animal spirits and nervous sensibility as it gained influence in

²¹ John Locke, *An Essay Concerning Humane Understanding* (London: printed for Tho. Basset and sold by Edw. Mory, 1690 [circ. 1689]). For the importance of Locke’s work in physiological discussions, see George Rousseau, “Science and the Discovery of the Imagination in Enlightened England,” *Eighteenth-Century Studies* 3, no. 1 (1969), 111. Rousseau argued that the efforts of “Descartes, Hobbes, Malebranche, and, more significantly, Locke” effectively led to a moment where “the imagination was physiologically created.” John Sutton, *Philosophy and Memory*, 158. For a discussion of Locke’s medical ideas and participations, see Gaukroger, *Collapse of Mechanism*, 162-3. Gaukroger also has commented on Malebranche’s ideas about reason, sensibility, the mind, and body. *Ibid.*, 439. For the wide influence of late seventeenth-century natural philosophy and medicine in Locke’s *Essay*, see Peter Walmsley, *Locke’s Essay and the Rhetoric of Science* (Cranbury: Associated University Presses, 2003). For the influence of late seventeenth-century natural philosophy and medicine on Locke’s writing, see G. A. J. Rogers, “The Intellectual Setting and Aims of the *Essay*,” in *The Cambridge Companion to Locke’s “Essay Concerning Human Understanding,”* ed. Lex Newman, 7-33 (Cambridge: Cambridge University Press, 2007), 17-24.

²² See Sergio Moravia, “From Homme Machine to Homme Sensible: Changing Eighteenth-Century Models of Man’s Image,” *Journal of the History of Ideas* 39, no. 1 (1978): 45-60.

²³ Emily Booth, “A Subtle and Mysterious Machine:” *The Medical World of Walter Charleton (1619-1707)* (Dordrecht: Springer, 2005), 186.

²⁴ George Rousseau, “Temperament and the Long Shadow of Nerves in the Eighteenth Century,” *Brain, Mind and Medicine: Essays in Eighteenth-Century Neuroscience* (New York: Springer, 2007), 360.

²⁵ This progression paralleled literature’s Ancients and Moderns debate.

medicine and was essential to the rubric of sensibility. Within an increasingly mechanistic view of bodies in anatomy and medicine, animal spirits retained profound vitalist functions and meanings.

I have found nothing to refute Rousseau's note that there is "no secondary study that has [prior to 1969] surveyed eighteenth-century theories of nerves or...of animal spirits."²⁶ Since then, several scholars have attempted to delineate the history of nervous physiology, including hollow tube, solid, hydraulic, tensile, and vibration theories.²⁷ The most incisive work on eighteenth-century nerves is John Yolton's *Thinking Matter*, wherein he chronologically reviewed theories about the connection between mental effort and the somatic body.²⁸ Among these scholarly reviews, Willis's basic physiological scheme for animal spirits is recognized as decisive: "The animal faculty depends on refined animal spirits, distilled in the brain, and thence communicated by the nerves to the whole body."²⁹ In anatomical discussions nerves became increasingly described as the nexus of the senses, the soul, mental and physical action in the eighteenth century, particularly in relation to sensibility.³⁰

Sensibility

From the early eighteenth till the early nineteenth century sensibility inspired the arts, governed sociability, and coloured perceptions of the body and mind. It was a defining feature of Georgian culture. Reaching its height between the 1740s and 1770s, sensibility permeated social, political, personal, and—as this dissertation particularly reveals—medical and literary perceptions. Yet, defining sensibility was and is problematic.³¹ Sensibility was a kind of social expression and interaction, involving mental and physical sensitivity,

²⁶ Rousseau, "Science and the Discovery," 111.

²⁷ See Sidney Ochs, *A History of Nerve Functions: From Animal Spirits to Molecular Mechanisms* (Cambridge: Cambridge University Press, 2004); Gary Hatfield, "Remaking the Science of Mind: Psychology as Natural Science," in *Inventing Human Science: Eighteenth-Century Domains*, eds. Christopher Fox, Roy Porter, and Robert Wokler (Berkeley: University of California Press): 184-231.

²⁸ John Yolton, *Thinking Matter: Materialism in Eighteenth-Century Britain* (Oxford: Basil Blackwell, 1984).

²⁹ John Locke, *Thomas Willis's Oxford Lectures*, ed. Kenneth Dewhurst (Oxford: Sandford Publications, 1980), 54. Willis was considered an authority on animal spirits in eighteenth-century medical discourse. For Willis's reputation, see Marmaduke Berdoe, *An Essay on the Nature and Causes of the Gout, with a few Conjectures on the Probability of its Cure* (Bath, 1771), 4.

³⁰ Thomas Laqueur, *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA: Harvard University Press, 1990), 204.

³¹ For definitions of sensibility, see G. J. Barker-Benfield, *The Culture of Sensibility: Sex and Society in Eighteenth-Century Britain* (Chicago: University of Chicago, 1992), introduction; Ann Jessie Van Sant, *Eighteenth-Century Sensibility and the Novel: The Senses in Social Context* (Cambridge: Cambridge University Press, 1993), 1-3, 7; Ildiko Csengei, *Sympathy, Sensibility and the Literature of Feeling in the Eighteenth Century* (Basingstoke: Palgrave Macmillan, 2012), 1.

awareness, impressions, and responses.³² Sentimental narratives relied upon sensibility to provide dramatic responses—including deep feelings, like empathy and repulsion, and gestures, like tears and swooning.³³ G. J. Barker-Benfield suggests this “flexibility” in defining sensibility follows from it being “synonymous with consciousness, with feeling, and eventually identifiable with sexual characteristics.”³⁴ These attributes of sensibility were unified by nerve physiology, which connection scholars such as Barker-Benfield, Juliet McMaster, Rousseau,³⁵ Ann Jessie Van Sant,³⁶ and Elizabeth Haigh³⁷ emphasize.³⁸ However, the specific physiological ideas that informed sensibility are not yet detailed. My interest is in how medical ideas about nerves and generation were bound up with cultural representations about sensibility and sexuality.

By the 1730s, theories, ideas, and practices of sex and generation were encoded in a set of signature gestures, responses, and corporeal obsessions intrinsic to sensibility.³⁹ Both literati and natural philosophers constructed models immediately connecting mental and generative functions. Since sensibility was premised upon nerves, and since nerves provided the most sensitivity to the genitals, moments of sensibility often invoked sexual meanings. In depictions of sensibility, the organs, desires, pleasures, and processes of generation powerfully affected individuals. For some, only by God’s grace could sexual inclinations be overcome: a human struggle exemplified by the ardent devotion of Samuel Richardson’s virtuous Pamela. Nervous physiologies reinforced the idea that generation was beyond human control, as the sex organs were endowed with an exquisite sensitivity and autonomous power that extended beyond the will’s governance. This theme continued from discussions Willis and Locke had made concerning the rational mind, organs of generation,

³² The involvement of both mind and body is apparent in Samuel Johnson’s succinct definition of sensibility: “1. Quickness of sensation. 2. Quickness of perception.” In defining terms related to either sense or sensibility, Johnson seemingly struggled to distinguish the mind and the body, often designating a term belonging to “either mind or senses.” Samuel Johnson, *A Dictionary of the English Language*, (London, 1755), s.v. “Sensible.” Sense is most synonymous with perception; yet, sensibility more precisely signifies a degree of awareness and was the more commonly used term.

³³ cf. Van Sant’s distinction that sensibility was “associated with the body” and sentiment associated “with the mind” ignores the well-established notion that sensibility involved both mind and body. Sentiment is also not a complement to sensibility; rather, it is a result of having sensibility. Van Sant, *Eighteenth-Century Sensibility*, 4.

³⁴ Barker-Benfield, introduction to *Culture of Sensibility*.

³⁵ Rousseau, “Temperament and the Long Shadow.”

³⁶ Van Sant, *Eighteenth-Century Sensibility*.

³⁷ Elizabeth Haigh, “Vitalism, the Soul, and Sensibility: The Physiology of Théophile Bordeu,” *Journal of the History of Medicine and Allied Sciences* 31, no. 1 (1976): 30-41.

³⁸ There is debate as to the extent of influence that medical and physiological discussions had on the culture of sensibility; cf. Faramerz Dabhoiwala, “Lust and Liberty,” *Past and Present* 207, no. 1 (May 2010): 89-179; Broman, “Medical Sciences,” 4: 472.

³⁹ Csengei has called these the “symptom-language of tears, sighs and swoons.” *Sympathy, Sensibility*, 2.

and animal spirits. Consider how the levelling evening sun light, tinted by the crimson curtains, then reflected on the *fille de chambre*'s face harks back to Newton's *Opticks* (1704). Moreover, by closing the scene with "'tis associated," Sterne credited one of his favourites, Locke's *Essay*.⁴⁰ Indeed, many sexual scenarios in sensibility literature invoked themes from science and medicine.

As literature of sensibility grew in the mid-eighteenth century, so did an awareness that people enacted and read sexual and reproductive conditions through manner and affect. As Juliet McMaster argues, readers of sensibility literature "were alert to the mind/body connection, and took seriously the business of interpreting the one through the other."⁴¹ A fine example of this kind of reading within a novel of sensibility occurs in Oliver Goldsmith's *The Vicar of Wakefield*, when a slight sexual meaning accidentally enters polite conversation: "This was said without the least design, however it excited a blush, which she strove to cover by an affected laugh, assuring him, that she scarce took any notice of what he said to her; but that she believed he might once have been a very fine gentleman. The readiness with which she undertook to vindicate herself, and her blushing, were symptoms I did not internally approve; but I repress my suspicions."⁴² Acute observation and interpretation—the reliance on senses to know—paralleled empiricism in anatomy and medicine. Medical topics like physiognomy particularly exemplify "reading" of bodies to understand minds. However, those who read, or sensed in some way, were also affected mentally and physically. The connection between sensibility and the sex organs consolidated anxieties about sensibility being sexually indecent. Such anxieties led to the condemnation of novel reading as a perverting activity for both males and females. As Hartley wrote: "Young Persons hear and read numberless Things, in this degenerate and corrupt State of human Life, which carry nervous Influences of the pleasurable kind (be they Vibrations, or any other species of Motion) to the Organs of Generation."⁴³ Theories on human generation, sex organs, animal spirits, and nerves were inextricably bound with representations of sexuality and sensibility in sentimental, erotic, and satiric literature.

⁴⁰ As Barker-Benfield postulates, the ideas of Locke and Isaac Newton were essential to the construction of sensibility. See Barker-Benfield, *Culture of Sensibility*, 3, 4. Northrop Frye also emphasized the influence of Locke and Newton on the Augustan literary imagination. Northrop Frye, "Varieties of Eighteenth-Century Sensibility," *Eighteenth-Century Studies* 24, no. 2 (1990-91), 160.

⁴¹ Juliet McMaster, introduction to *Reading the Body in the Eighteenth-Century Novel* (Basingstoke: Palgrave Macmillan, 1988).

⁴² Oliver Goldsmith, *The Vicar of Wakefield* (Oxford: Oxford University Press, 1999 [orig. 1766]), 32-33.

⁴³ David Hartley, *Observations on Man, His Frame, His Duty, and His Expectations* (London: Samuel Richardson, 1749), 240. Clive Probyn related that "reading novels was cited as a cause of female sexual disorders." Clive Probyn, *English Fiction of the Eighteenth Century, 1700-1789* (London: Longman, 1987), 20.

Sensibility influentially aided both the rise and fall of the animal spirits doctrine. Culturally significant and much discussed literature like Sterne's *Tristram Shandy* had pointed and detailed remarks about animal spirits and generation, which, although quite complex remarks, appear to have been positively received and understood by a wide audience. As Tristram declares on the opening page, "you have all, I dare say, heard of the animal spirits, as how they are transfused from father to son, &c. &c."⁴⁴ Many heard of animal spirits and their reproductive role *only* through such cultural references. What literary scholar Frank Brady suggested about *Tristram Shandy*—that the "sentimental and sexual components of sensibility are inextricable"—also rang true for sentimental novels generally.⁴⁵ For literature of sensibility, nerves bound the sentimental and sexual components together. However, as medical understandings of nerves changed at the end of the eighteenth century, so too did the connection between sensibility and sexuality in literature.

Sensible Genitals

An assumption maintained throughout late seventeenth- and eighteenth-century discussions about generation was that the genitalia of women and men could exert significant influence on their minds because those organs were innately nervous, sensitive, desirous, and even self-willed. Therefore, the notion of sensible genitals, as thought of within eighteenth-century nerve physiology and the culture of sensibility, needs to be considered in order to recognize how sexuality resulted from a mind/body dynamic. While most historians of eighteenth-century sexuality recognize the significance of nerves, few offer more than a cursory comment about the crucial role nerves played in sexual and reproductive physiology. For example, in his history of masturbation, Thomas Laqueur suggests that "nerves and nervous fluids were at the physiological core" of eighteenth-century masturbation pathologies,⁴⁶ but he fails to explore this "physiological core" any further. When Willis "discovered" spinal nerves attached to the testicles, he showed that human genitalia—both male and female—had an immediate connection to the brain and mind.⁴⁷ This genital-mental connection prompted new conjectures about sexual pleasure and pain; mental participation in fertility, arousal, conception, and gestation; and how the organs of generation affected emotion, imagination, and memory. Although confined to nerves, the domain of generation expanded both into the higher faculties and through the sensible body. Crucially, generative activities became the greatest drain on the nervous system, disrupting the sensible body and debilitating the rational mind. Hartley's treatise *Observations of Man*

⁴⁴ Sterne, *Tristram Shandy*, 1.

⁴⁵ Brady, "Tristram Shandy," 53.

⁴⁶ Thomas Laqueur, *Solitary Sex: A Cultural History of Masturbation* (New York: Zone Books, 2003), 204.

⁴⁷ See chapter one for a fuller discussion of Willis's "discovery."

(1749) designated the organs of generation as “endued with a greater Degree of Sensibility than the other Parts.”⁴⁸ Sensibility in the sex organs made them influential and variable constituents of the body. Strong feelings derived from these parts, but so too did malignant disorders. Sensitivity in the organs of generation was so heightened as to pose as an alternative nervous centre to the brain. Testicles, penises, wombs, and vaginas were perceived as self-willed. And although this has to date been little analyzed, nerves and animal spirits featured prominently in discussions about sexual organs, behaviours, thoughts, and, ultimately, volition.

Animal spirits allowed a two-way influence between an individual’s brain and groin. Upon receiving a sexual sensation, animal spirits were transported to the brain and, depending on the intensity of the sensation, could gently relay the slightest awareness to the mind, elicit the fancy, overcome all reason, or totally debilitate the person’s mental capacity. According to William Smith’s *Dissertation on the Nerves* (1768), animal spirits were an immaterial substance that communicated with both an immaterial soul and the material body through nerves, causing both voluntary and involuntary actions.⁴⁹ Revealingly, Smith’s first example of involuntary actions caused by animal spirits is a male erection.⁵⁰ The organs of generation were the prime example of such movements: excited by the animal spirits, yet beyond the individual’s will and control. As the most sensible part of the body, sex organs were both the likeliest to receive sensation and to respond in an autonomous fashion. Understandably, this relationship between animal spirits and the organs of generation elicited concern, as the culpability for sexual actions was cast into ambiguity. But, automatic sexual responses also raised questions about public decorum, the origin of sexual infirmities, and the nature of the mind.

Arousal was not the only involuntary action of animal spirits that involved the brain and genitals. Human conception was understood as originating with the soul in the mind, then carried to the genitalia via animal spirits, and finally perfected following sexual intercourse. Each aspect of generation, including pleasure, pain, emotion, conception, gestation, birth, and all sorts of disorders, were intimately bound to the actions and qualities of animal spirits. These physiological precepts were encoded into terminology used in anatomical descriptions of these organs: nervous coats (testicles), nervous bodies (penis cavernosa and clitoral bodies),⁵¹ nervous membranes (glans penis and glans clitoridis), and nervous nets (womb). As sensible and impressionable parts, organs of generation signified sexual and reproductive experiences or tendencies, usually read through size and shape. A

⁴⁸ Hartley, *Observations*, 239.

⁴⁹ See William Smith, *Dissertation on the Nerves...* (London: W. Owen, 1768), 97-8.

⁵⁰ *Ibid.*, 98.

⁵¹ William Cockburn called them “Nerveo-spongy Bodies.” William Cockburn, *The Symptoms, Nature, Cause, and Cure of a Gonorrhoea* (London, 1713), 12.

large clitoris indicated a lascivious woman; a *straight* or narrow vagina belonged to a virgin maid. Sexual experience was also read through polite physiological gestures. In Richardson's sequel to *Pamela*, the vulgar Sir Jacob swore that Pamela was a "Maiden Lady"⁵² because she had the blush of a "Virgin Rose."⁵³ Genital variations were a kind of physiognomic sign. A large penis likely belonged to a slow-witted fellow. Yet, as reproductive bodies revealed the mind, so too did the mind implicate the reproductive body. Mental shocks, for example, detrimentally affected the qualities of seed, genitals, and fetuses. This concept that mental experiences translated through nerves into reproductive manifestations was at the centre of Mary Toft's rabbit births in 1726; Toft had been surprised by a rabbit in her garden, began craving rabbit, which then caused her to engender and birth a litter.⁵⁴ These crossovers between genital anatomy and mental attributes followed from the supposition that the mind, sex, and generation were intimately connected.

Sex Difference and Gender Politics

How sex difference was understood within sensibility and generation is a primary question in current historiography and this dissertation. To what extent were sex differences determined by the structure and function of nerves, genitalia, or brains, which medics examined and described? Was gender explained by the same physiological ideas about animal spirits and nerves that sensibility built upon? These questions often drove or coloured discussions on generation, nerves, and sensibility. There has been substantial and innovative scholarship on eighteenth-century sex and gender in the last few decades; however, Roy Porter's observation that "our hard evidence about the sexual lives, thoughts and feelings of Europeans in 1650, 1750, and 1850 remains pathetically meagre" still holds true.⁵⁵ Scholars have established the eighteenth century as a period of dramatic and interrelated change in culture, gender, sex, and medicine.⁵⁶ Foucault postulated a move to medicalize sexuality in the eighteenth century whereas Laqueur proposed that eighteenth-century reproductive anatomy evidenced the development of two incommensurable sexes. More recently, Faramerz Dabhoiwala carefully details an eighteenth-century sexual revolution derived from

⁵² Samuel Richardson, *Pamela: Or, Virtue Rewarded. In a Series of Familiar Letters from a Beautiful Young Damsel to her Parents: and Afterwards, in her Exalted Condition...* (London: printed for S. Richardson and sold by C. Rivington and J. Osborn, 1741), 3: 314.

⁵³ *Ibid.*, 315.

⁵⁴ The history of Mary Toft and the idea of maternal impressions is discussed further in chapter four. According the narrative of *Tristram Shandy*, a mental shock to his father during coitus is the cause of Tristram's oddities and miseries.

⁵⁵ Roy Porter, "The Literature of Sexual Advice before 1800," in *Sexual Knowledge, Sexual Science: The History of Attitudes to Sexuality*, eds. Roy Porter and Mikuláš Teich (Cambridge: Cambridge University Press, 1994), 151.

⁵⁶ See Michel Foucault, *The History of Sexuality*, 3 vols. (London: Penguin, 1992 [orig. 1976, 1984, 1984]); Laqueur, *Making Sex*.

cultural, social, legal, and political influences.⁵⁷ Dabhoiwala's description of a heterogeneous but relatively liberal discussion about sexual topics from the late seventeenth until the late eighteenth century in Britain corroborates with the attitudes I encountered in physiological and medical discussions. Yet, in considering Georgian medical and scientific discourse, Dabhoiwala relies on Laqueur's *Making Sex*.⁵⁸ The shift from a one-sex to a two-sex model that Laqueur described has since been revised or outright refuted by several scholars.⁵⁹ His argument of pronounced sexual distinction in medicine and culture is not supported by the physiology generally maintained in the eighteenth century.⁶⁰ Rather, according to understandings of the body and mind based upon animal spirits and sensibility, males and females shared a physiology that made their sexualities similar and even interchangeable. Their reproductive body parts, although depicted as having different macroscopic anatomical structures, had the same microscopic and nervous qualities, which gave them similar functions. Those feelings, desires, experiences, and pathologies that related to the genitals and mind were shared by the sexes. In eighteenth-century learned discussions, females and males shared the same physiological system that linked genitalia to the mind, but differed by degrees of nervous or mental sensitivity. Differences in sexuality between males and females heavily depended upon other social factors, especially class.

Descriptions of animal spirits and sensibility spoke to distinctions in gender, sex, class, and race. But the profound sex distinction Laqueur described emerging did not exist in

⁵⁷ Faramerz Dabhoiwala, *The Origins of Sex: A History of the First Sexual Revolution* (London: Allen Lane, 2012). For a critique of the "whiggish analysis of sexual experience" that suggests an increasing sexual liberation and sophistication through the early modern period, see Tim Hitchcock, *English Sexualities, 1700-1800* (New York: St. Martin's Press, 1997), 4.

⁵⁸ Dabhoiwala, *Origins of Sex*, 143-4.

⁵⁹ See Joan Cadden, *Meanings of Sex Difference in the Middle Ages: Medicine, Science, and Culture* (Cambridge: Cambridge University Press, 2003), 3; Lorraine Daston and Katharine Park, "The Hermaphrodite and the Orders of Nature: Sexual Ambiguity in Early Modern France," *GLQ* 1, no. 4 (1995), 420; Winfried Schleiner, "Early Modern Controversies about the One-Sex Model," *Renaissance Quarterly* 53, no. 1 (2000): 180-91; Michael Stolberg, "A Woman Down to Her Bones: The Anatomy of Sexual Difference in the Sixteenth and Early Seventeenth Centuries," *Isis* 94, no. 2 (2003): 274-99; Wendy D. Churchill, "The Medical Practice of the Sexed Body: Women, Men, and Disease in Britain, circa 1600-1740," *Social History of Medicine* 18, no. 1 (2005): 3-22.

⁶⁰ In particular, Laqueur's theory that a one-sex medical model became a model of two sexes during the eighteenth century neither accounts for major categorical distinctions made in most medical and anatomical texts regarding male and female generation before, during, and after the eighteenth century nor does Laqueur's theory account for modern-day perspectives in reproductive biology concerning the morphological analogy between male and female sex organs, which is essentially the same as his one-sex model. Problematically, his own modern interpretation of historic anatomical images directs his arguments. For a discussion of some problems in how Laqueur historicized his argument of a pervasive one-sex model, see Jonathan Sawday, *The Body Emblazoned: Dissection and the Human Body in Renaissance Culture* (London: Routledge, 1995), 213-14.

the dominant eighteenth-century medical and cultural perspectives. Scholarship on anatomical display suggests that the emphatic visual proof of morphological differences between the sexes began in the late eighteenth century, rather than in the early modern period, as Laqueur described.⁶¹ In medical discussions some experiences were construed as specific to one sex. For instance, pregnancy, childbirth, menstruation, and greensickness were typically specific to females. However, there was a remarkable amount of slippage between the sexes even in these distinctly female experiences. Male forms of pregnancy, childbirth, menstruation, and greensickness also existed in eighteenth-century medical and literary discourses. Masculine and feminine attributes, such as robust and vulnerable respectively, were not stably connected to either sex: men through sexual or mental experience could be enfeebled or women could become hardened. Other kinds of categories besides sex and gender were just as pronounced. Delicate and refined feelings, qualities, and responses were fashionable and prestigious, relegated to the moneyed and socially mobile. Those classes desired finely tuned sensibility, one which perceived the emotions, experiences, and thoughts of oneself and other people. Significantly, there was longstanding debate and disagreement about gender descriptions in the culture of sensibility. Which sex was more lascivious? Which sex was more sensible? Even in the case of the traditionally male attribute of reason, female individuals were often depicted as more capable, rational, and controlled.

The eighteenth century was not simply a period of transition from Renaissance to Victorian gender identities as many historical accounts suggest. Instead, the period from the 1730s until 1770s had a stable and predominant view on sexuality and gender in learned discussions. This view placed males and females as sexual equivalents with similar bodies and minds. For example, both sexes experienced lustful desires emanating from the genitals, and both sexes could either overcome those lewd inclinations with reason or succumb to them and pursue sexual pleasure. Nerves and animal spirits operating between the mind and groin worked the same for both sexes. Neither did these medical and literary discussions suggest deep, innate sexualities and sex differences, as Wahrman claimed.⁶² For all the social and cultural distinctions between men and women, such as clothes, education, work, and recreation, their sexual physiologies and pathologies were often the same. This claim

⁶¹ See Ludmilla Jordanova, *Nature Displayed: Gender, Science and Medicine 1760-1820* (London: Longman, 1999), particularly her essay "Gender, Generation and Science: William Hunter's Obstetrical Atlas." Also see Londa Schiebinger, "The Anatomy of Difference: Race and Sex in Eighteenth-Century Science," *Eighteenth-Century Studies* 23, no. 4 (1990): 387-405.

⁶² Dror Wahrman, *The Making of the Modern Self: Identity and Culture in Eighteenth-Century England* (New Haven: Yale University Press, 2006).

about similarity between the sexes in terms of sexual physiology is evidenced in both eighteenth-century medical and literary discourse.⁶³

To accurately depict eighteenth-century perceptions about sex and gender, this dissertation examines female *and* male reproductive bodies in proportion to their representation in that period's discussions on generation and nerves. Historical studies on gender politics in eighteenth-century medicine has tended to cast female bodies as the focal subject, with disproportionately little attention paid to male reproductive organs. Among cultural histories about early modern generation, the history of midwifery has proven the most prolific topic.⁶⁴ Historians, such as Helen King⁶⁵ and Mary Fissell,⁶⁶ have incisively read gender constructions and attitudes from obstetrical and midwifery texts and practices. As well, there are a several histories recounting the changing relationship between traditional midwifery and male-dominated practices in the eighteenth century.⁶⁷ A similar academic focus, wherein female bodies are at the centre of critical analysis, has been adopted by cultural historians of eighteenth-century erotic literature and anatomical display. Barbara Duden,⁶⁸ Lisa Forman Cody,⁶⁹ Lianne McTavish,⁷⁰ Karen Harvey,⁷¹ Elaine

⁶³ For other studies that used both medical and literary evidence to reconstruct eighteenth-century perspectives on sex, see Angus McLaren, *Reproductive Rituals: the Perception of Fertility in England from the Sixteenth to the Nineteenth Century* (New York: Methuen, 1984); Roy Porter and Marie Mulvey Roberts, eds., *Literature and Medicine during the Eighteenth Century* (London: Routledge, 1993); Porter and Teich, *Sexual Knowledge*; Roy Porter and William F. Bynum, eds., *William Hunter and the Eighteenth-Century Medical World* (Cambridge: Cambridge University Press, 1985); Rousseau, "Science and the Discovery;" Rousseau, "Temperament and the Long Shadow."

⁶⁴ See Lisa Forman Cody, *Birthing the Nation: Sex, Science, and the Conception of Eighteenth-Century Britons* (Oxford: Oxford University Press, 2005); Pam Lieske, *Eighteenth-Century British Midwifery*, 12 vols. (London: Pickering and Chatto, 2007-08); Eve Keller, *Generating Bodies and Gendered Selves: The Rhetoric of Reproduction in Early Modern England* (Washington: University of Washington Press, 2007); and Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of a Sixteenth-Century Compendium* (London: Ashgate, 2007).

⁶⁵ Helen King, *The Disease of Virgins: Green-Sickness, Chlorosis and the Problems of Puberty* (London: Routledge, 2003); Helen King, *Midwifery, Obstetrics*.

⁶⁶ Mary Fissell, "Hairy Women and Naked Truths: Gender and the Politics of Knowledge in Aristotle's Masterpiece," *The William and Mary Quarterly* 60, no. 1 (2003): 43-74; Mary Fissell, *Vernacular Bodies: The Politics of Reproduction in Early Modern England* (Oxford: Oxford University Press, 2004).

⁶⁷ See Wilson, *Making of Man-Midwifery*; Monica H. Green, *Making Women's Medicine Masculine: The Rise of Male Authority in Pre-Modern Gynaecology* (Oxford: Oxford University Press, 2008). These histories of midwifery have included such topics as the gendering of vocations, the establishment of early medical professions, the use of printed advertisement and slander by all types of practitioners, the growing favour of technical instruments, and the reorganization of obstetrical practices such as laying-in, just to name a few.

⁶⁸ Barbara Duden, *Disembodying Women: Perspectives on Pregnancy and the Unborn*, trans. Lee Hoinacki (Cambridge, MA.: Harvard University Press, 1993).

⁶⁹ Cody, *Birthing a Nation*.

Hobby,⁷² Sebastian Pranghofer,⁷³ Londa Schiebinger,⁷⁴ Pam Lieske,⁷⁵ Jordanova,⁷⁶ and Laqueur have written on the medical and anatomical display of female reproductive bodies in the eighteenth century, but none have written about the dissections and displays of male reproductive organs.⁷⁷ If dissected male reproductive organs were displayed next to female reproductive organs in anatomical atlases and museum exhibits, then why does the historiography suggest female bodies were uniquely sexualized, objectified, and displayed?

Commenting on gender criticism of eighteenth-century anatomy, Rina Knoeff observes that “the male organs of generation are mostly left out of the discourse.”⁷⁸ In anatomical texts and displays male organs of generation regularly featured alongside and in complement to female organs. Only in a few specialized obstetrical texts and settings more typical of the latter part of the century were female reproductive organs exclusively presented. In this same strain as Knoeff’s criticism, McLaren remarks that even the “pathbreaking study *Making Sex: The Body and Gender from the Greeks to Freud* by Thomas Laqueur all but ignored men.”⁷⁹ McLaren’s is the only significant cultural history of male reproduction and sexuality, as he argued that male impotence went from a topic of early-modern public ribaldry to a late eighteenth-century private medical concern.⁸⁰ Some current research involving interdisciplinary groups gives a more dynamic and academically well-rounded approach to the history of reproduction; yet these groups too tend to

⁷⁰ See Lianne McTavish, *Childbirth and the Display of Authority in Early Modern France* (Alderstot: Ashgate, 2005).

⁷¹ Karen Harvey, “Visualizing Reproduction: A Cultural History of Early-Modern and Modern Medical Illustrations,” *Journal of Medical Humanities* 31, no. 1 (2010): 37-51.

⁷² Elaine Hobby, “‘Secrets of the Female Sex’: Jane Sharp, the Reproductive Female Body, and Early Modern Midwifery Manuals,” *Women’s Writing* 8, no. 2 (2001): 201-12.

⁷³ Sebastian Pranghofer, “Changing Views on Generation—Images of the Unborn,” in *The Secrets of Generation: Reproduction in the Long Eighteenth Century*, eds. Ray Stephanson and Darren Wagner (Toronto: University of Toronto Press, in preparation).

⁷⁴ Londa Schiebinger, “Skeletons in the Closet: The First Illustrations of the Female Skeleton in Eighteenth-Century Anatomy,” *Representations* 14, no. 4 (1986): 42-82.

⁷⁵ Pam Lieske, “Deformity of the Maternal Pelvis in Late Eighteenth-Century Britain,” in *Secrets of Generation*.

⁷⁶ See Jordanova, *Nature Displayed*.

⁷⁷ Whereas male reproductive bodies have not been written about, their sexuality certainly has. Like female gender studies, the history of eighteenth-century male sexuality has recently piqued academic interest. See Tim Hitchcock and Michèle Cohen, eds., *English Masculinities, 1660-1800* (New York: Addison Wesley, 1999); Kenneth Borris and George Rousseau, eds., *The Sciences of Homosexuality in Early Modern Europe* (London: Routledge, 2007).

⁷⁸ Rina Knoeff, “Sex in Public. On the Spectacle of Female Anatomy in Amsterdam around 1700,” *l’Homme. Europäische Zeitschrift für feministische Geschichtswissenschaft* 23, no. 1 (2012), 48.

⁷⁹ McLaren, introduction to *Impotence*, xv.

⁸⁰ McLaren, *Impotence*.

concentrate largely on female reproduction.⁸¹ The lack of attention to male bodies and generative organs is a critical oversight, which is intentionally amended in this project. Attending equally to both male and female generation is not as much about current academic gender politics as it is about accurate historical representation, as chapters on male generation almost always complement chapters on female generation in eighteenth-century medical and anatomical treatises. The amount of time spent on how animal spirits affected male genitalia will be shown to raise questions about the exclusive emphasis on female bodies.

Gender politics were inextricable from the medical pursuits, anatomical demonstrations, physiological theories, and culture of sensibility. Some early modern medical authors, as Roger demonstrated, skewed theories about generation to “safeguard male superiority.”⁸² At times, theories related to seed, pleasure, desire, and venereal disease, privileged male experiences and, at other times, female. However, any kind of male privileging did not clearly and consistently occur in generation theories. For instance, Harvey’s proclamation of “Ex ovo omnia”⁸³ not only resounded in the ears of later anatomists, but also resonated with eighteenth-century discussions about gender and the possibility that females had a more important role in generation. How much or what each sex contributed during conception, and to their progeny, was debated throughout the era. Theoretical debates, such as between spermists and ovists, emphasize the impact that gender and sex had on natural philosophers’ ideas. But, such varied opinions also underscore the pluralities in eighteenth-century perspectives on gender that entered anatomy, physiology, and medicine generally. Jordanova’s *Sexual Visions* shows that gender politics also critically influenced understandings and approaches in late eighteenth-century anatomy. This thesis explores further how these gender-related medical theories were not only reflected in the literature of sensibility, but also the many social debates and anxieties about both male and female sexuality.

The extent of anatomical and physiological homology between the sexes remained a prolific and varied debate throughout the century; however, sensibility and nerve physiology levelled sexual differences. Anatomically, male and female bodies were medically categorized as such according to external genitalia. Yet, in many eighteenth-century discussions this sex difference seemed superficial and less important than the sexes’

⁸¹ Such as the University of Saskatchewan symposium “Imagining Reproduction in History and Science,” proceedings in *Journal of Medical Humanities* 31, no. 1 (March, 2010), and the “Generation to Reproduction” group at the University of Cambridge, which primarily focuses on female topics.

⁸² Roger, *The Life Sciences*, 19.

⁸³ William Harvey, frontispiece to *Exercitationes de Generatione Animalium* (Amsterdam: Apud Ludovicum Elzevirium, 1651).

physiology. The earlier dichotomy of hot males and cold females emphasized a profound difference between the sexes. But, eighteenth-century medics applied a similar nerve physiology to both sexes: females and males had a similar fluid economy, the same kinds of pleasure and pain, and like tissues in their sex organs with analogous functions. On the other hand, similar processes were expressed very differently in each sex: females released superfluous fluid by menstruating, males by ejaculation, nose bleeds, hemorrhoids, or irregular weeping wounds. The emergence of empirical anatomy with new technologies prompted more detailed descriptions of male and female genitalia, which Laqueur interpreted as evidencing a widespread reconceptualization of sex difference. Rather, the most profound difference was in descriptions of how males and females used animal spirits, in generation and in thinking. Male and female genitalia exerted the same influence over behaviour, thinking, and wellness, but to greater or lesser degrees, or with different effects depending on their sex. These differences within a shared nerve physiology are presented in the following chapters.

This thesis also explores how gender was depicted in literature of sensibility, and whether those depictions correlated to medical ideas. Literary representations of male and female sexuality transformed dramatically due to the effects of sensibility. Barker-Benfield, Van Sant, and McMaster all postulate that sensibility was more pronounced in females and, moreover, resulted from the influence of female writing and reading. This, however, often does not hold true. The basis of sensibility, as I argue, was initially formulated by male natural philosophers, physicians, and writers as a general system of physiology. Male characters fill many of the most significant posts in the canon of sensibility literature, including such notables as Henry Fielding's Joseph Andrews, Henry Mackenzie's Harley, and Laurence Sterne's Uncle Toby, are male. Several medical descriptions of nervous sensibility involve males of extremely sensible constitutions. Yet, female delicacy of constitution was more recognized near the close of the century, as instanced by Nikolai Detlef Falck's description: "Throughout the animal economy, the fibres as well as the disposition are more delicate and soft in the feminen gender than in the masculine."⁸⁴ The qualities of sensibility were often feminine qualities: passionate empathy, sensitive response, sexual passivity, and a generally caring demeanour, which highly sensible, male characters all exhibited. However, these qualities, as numerous examples in this dissertation show, were often expressed by sensible males and females alike. Therefore, although animal spirits, like sensibility, were common to both males and females, they acted differently in each sex and profoundly affected expressions of gender. Once one starts examining the

⁸⁴ Falck, *Venereal Disease*, 26.

animal spirit economy of sensibility the perceived qualities and characteristics of men complicate our binary models of eighteenth-century gender and sexuality.

Genres

Knowing how eighteenth-century medicine and literature related to each other is crucial for understanding how physiologies of nerves and sex organs became linked to the culture of sensibility. “The new science,” as historian of science Thomas Broman described “became widely influential among seventeenth-century scholars in the so-called ‘republic of letters,’ during the eighteenth century science first began to move beyond such circles and to become regulative in public discourse.”⁸⁵ However, Broman’s account does not capture the many networks and fluid exchanges between those individuals and groups participating in science and medicine, and those involved in literary pursuits. Literature significantly influenced theories and practices related to nerves and generation by critically exploring and widely disseminating those ideas and activities. I am also interested in discovering those literary genres that most meaningfully engaged with medical ideas about nerves and generation, and the manner in which those specific genres did so.

Some eighteenth-century interdisciplinary exchanges involved personal relationships, such as between medical practitioners and their patients. A physician like Cheyne communicated nerve physiology ideas to certain patients and friends who were influential in literary and print culture, including Richardson and David Hume. Conversely, sentimental narratives and techniques were used in the emerging genre of medical case studies.⁸⁶ Nerves, sex, generation, and sensibility were not specific to any single genre or cultural medium, but were more meaningfully engaged by certain literary forms. It appears that theories of generation and nerves figured prominently in literature in two ways: first, sentimental novels adopted those theories as the basis for sensibility.⁸⁷ Second, these theories were prominent in various kinds of satiric and erotic writing that critically explored and incorporated natural philosophical and medical discourse. These connections are the reason why this dissertation looks most closely at eighteenth-century sentimental novels and satiric/erotic writing.

⁸⁵ Thomas Broman, “The Habermasian Public Sphere and ‘Science’ in the Enlightenment,” *History of Science* 36, no. 112 (1998), 124-5.

⁸⁶ The parallel development of literary and natural philosophical or medical genres signifies deeper connections between these topics of writing. Frederic Holmes rightly contended that the turn of the eighteenth century was “a formative stage in the emergence of the research paper as a stable genre in the scientific literature.” Frederic Holmes, “Argument and Narrative in Scientific Writing” in *The Literary Structure of Scientific Argument: Historical Studies*, ed. Peter Dear (Philadelphia: University of Pennsylvania Press, 1991), 164.

⁸⁷ See David Shuttleton, “‘Pamela’s Library’: Samuel Richardson and Dr. Cheyne’s ‘Universal Cure,’” *Eighteenth-Century Life* 23, no. 1 (1999): 59-79; David Shuttleton, ed., *The Correspondence of Samuel Richardson with George Cheyne* (Cambridge: Cambridge University Press, in press).

Whereas lascivious writing explicitly connected reproductive theories with sensibility, more polite texts tacitly implied sexual or reproductive meanings and events. Many kinds of literature, such as novels and sermons, that hesitated to immodestly mention anything overtly sexual used recognizable cues like blushes, swoons, looks, and postures to intimate the sexual. Consider Pamela's response to when the rapacious Mr. B put his hand in her bosom: "when my Fright let me know it, I was ready to die; and I sighed, and scream'd, and fainted away."⁸⁸ These terms and gestures communicating Pamela's fine sensibility to the reader were erotic. This scene also throws the question of volition into relief: "When I think of my Danger, and the Freedoms he actually took, tho' I believe Mrs. *Jervis* saved me from worse, and she says she did, (tho' what can I think, who was in a Fit, and knew nothing of the Matter?)." ⁸⁹ Recognizing the physiological ideas present in sensibility allows one to peek at the sexual meanings hiding behind the polite facades commonly found in sentimental novels. Theories of nerves, generation, and sensibility were also present in tragic poems and plays, biographies, personal letters, essays, and in fine art; however, such forms typically had less significant engagement than novels of sensibility and bawdy works did with those theories, and simply lie beyond the scope of this project. Erotic literature regularly incorporated natural philosophy, medicine, and anatomy.⁹⁰ One distinguished example is John Cleland's *Memoirs of a Woman of Pleasure*, commonly called *Fanny Hill* (1748), which frequently had arousing images, terminology, and themes adapted from theories of nerves, sensation, and generation. In fact, *Fanny Hill* employs sensibility in such a significant way as to readily admit it into that genre, although most other scholars have not. Because of these qualities, *Fanny Hill* is the best example of the physiological ideas underlying sensibility being openly exposed in a literary work. In other words, Cleland's erotic novel purposefully revealed all the body parts, sexual fluids, and nerve connections that in polite works of sensibility lay hidden, which is why his text is closely analyzed throughout this thesis.

Other eighteenth-century satiric and erotic literature also pointedly exploited scientific and medical reproductive terminology and ideas. Well-known literary depictions that pointedly criticized medical ideas and practices include the physician-projector that experimented with applying bellows to a dog's anus in Jonathan Swift's *Gulliver's Travels* and Abraham Johnson, who made an artificial womb to prove "a Woman may conceive without Commerce with Man," in John Hill's *Lucina sine Concubitu*.⁹¹ Physiological

⁸⁸ Richardson, *Pamela*, 1: 66.

⁸⁹ *Ibid.*, 67.

⁹⁰ See Peter Wagner, "Medical and Para-Medical Literature" in *Eros Revived: Erotica of the Enlightenment in England and America* (London: Secker & Warburg, 1988), 8-46.

⁹¹ John Hill, *Lucina sine Concubitu: A Letter Humbly Addressed to the Royal Society...* (London: M. Cooper, 1750), 25. See George Rousseau, "Sexual Knowledge. Panspermist

descriptions of mind-genital connections paralleled literary motifs wherein intellectual creations were metaphorical brain conceptions, gestations, and births.⁹² The literati used images of monstrous births or miscarriages satirically to disparage others' creative attempts. A sizeable historiography exists for eighteenth-century erotic literature,⁹³ of which some, such as Karen Harvey's and Porter's works, have closely considered the influence of natural philosophy on erotic writing. Yet, how experiments, demonstrations, and theories on genitalia related to the language and imagery of erotic texts has not been investigated. What does it mean that smutty narratives titillated readers using the rhetoric of natural philosophy? Did erotic literature affect the reception or composition of certain theories on pleasure, imagination, or generation more generally? These erotic texts were not held in the same esteem or responses as medical treatises or sentimental novels, but as Peter Wagner comments, these kinds of erotic works "are important, not because Fielding, Sterne, and other luminaries exploited them, but because people read them in the eighteenth century and because they helped form widely held opinions and prejudices."⁹⁴ Examining erotic writing, therefore, can offer insights into how anatomical displays and physiological discussions about genitalia entered literary circulation. The same sentiment holds true for satire that made bawdy jokes using medical or anatomical ideas and terms.⁹⁵

There are several examples of eighteenth-century satires making explicit and specific references to medical theories and practices about nerves and generation. The standard gimmick was to tease out the sexual and obscene elements in these theories and practices, and to parody the medics behind them. But, as in erotic works, thoughtful analysis of these satires reveals some of the responses, associations, and applications the literati, or even the public, had concerning what physicians, surgeons, and anatomists said about nerves connecting the brain and the groin. These satires also show something of the complex social status of these medical vocations. Anatomists, for instance, had mottled reputations,

Jokes, Reproduction Technologies and Virgin Births," in *A Cultural History of the Human Body in the Enlightenment*, ed. Carole Reeves (Oxford: Berg, 2010): 53-71.

⁹² Raymond Stephanson, *The Yard of Wit: Male Creativity and Sexuality, 1650-1750* (Philadelphia: University of Pennsylvania Press, 2004).

⁹³ Such as Roger Thompson, *Unfit for Modest Ears: A Study of Pornographic, Obscene and Bawdy Works Written or Published in England in the Second Half of the Seventeenth Century* (London: MacMillan, 1979); Wagner, *Eros Revived*; Lynn Hunt, ed., *The Invention of Pornography: Obscenity and the Origins of Modernity, 1500-1800*, (New York: Zone Books, 1996); Hitchcock, *English Masculinities*, 8-32; Bradford Mudge, ed., *When Flesh Becomes Word: An Anthology of Early Eighteenth-Century Libertine Literature* (Oxford: Oxford University Press, 2004); Karen Harvey, *Reading Sex in the Eighteenth Century: Bodies and Gender in English Erotic Culture* (Cambridge: Cambridge University Press, 2005).

⁹⁴ Wagner, *Eros Revived*, 4.

⁹⁵ As Sawday observed about the relationship between early modern literature and anatomy, "dissection and anatomization have come to be associated with satire." Sawday, *Body Emblazoned*, 1.

especially those who specifically researched the organs of generation. Although probing corpses, displaying genitalia, and imagining the secret workings of human reproduction became accepted—even prestigious, it still retained something of transgressive and indecent behaviour. Even more prone to parody were man-midwives, who flagrantly trod on and over conventional lines of decency. But not only medicine was satirized. From its beginnings, sentimental literature provoked satire, like Fielding's, that ridiculed the connection between the culture of sensibility, nerve physiology, and sexuality. This kind of satirical treatment culminated in Sterne's *Tristram Shandy*, which, like satires before it, emphasized the many links between medical and literary ideas.

When animal spirits began losing credibility, the physiological basis to sensibility fell away. This was in part due to the satirical lashing and critical treatment Sterne had given both spirits and sensibility. Near the close of the eighteenth century, genres dealing with generation and nerves underwent a final upheaval. Anxieties over such discussions about sex organs and activities led to concerns about novels of sensibility, pseudo-medical tracts, bawdy satire, and erotic literature. Shortly after the turn of the century, professionalizing medical and scientific vocations became increasingly polite and esoteric, middle-class values relegated bawdy works to smaller and smaller audiences, and literary use of and commentary on generation and nerves dwindled. Sensibility divorced from physiology and satirists no longer considered eighteenth-century ideas and research about generation and nerves as tempting prey. The discredit of animal spirits in physiology contributed to the decline of the culture of sensibility shortly after. Romantic and gothic literature became more appropriate responses for the laboratory science and clinical medicine that followed.

Chapters

The first chapter details medical understandings of animal spirits and their role in sexuality and reproduction, and by doing so establishes in finer detail the physiological understanding of animal spirits circulating between the brain and groin, which is referred to throughout this work. The chronology of this physiology is also detailed more clearly and comprehensively, and in reference to competing nerve and generation theories. Willis, Boerhaave, Walter Charleton, Thomas Bartholin, Francis Glisson, John Needham, and Hartley are considered as especially significant voices in these physiological discussions. Key attributes of animal spirits are emphasized, such as their malleable and ethereal qualities which accommodated specific theories about generation that had non-mechanistic aspects. How the mind participated in generation through nerves, especially in seed creation, and sexual sensation are introduced. Crucially, sexual and reproductive process—seed perfection, arousal, ejaculation, coitus—used and depleted valuable animal spirit stocks, which concept is explored further in subsequent chapters. In all of these sexual physiological ideas the involvement of literary writers and artists is also shown to be important.

The second chapter explores anatomical attention to the organs of generation. Innovations in experimentation, both in methods and technology like microscopy of cells, injections of vasculature, inflations of genitalia, and mountings of all sorts of body parts, visually represented the connections of genitalia to the rest of the body and especially the brain. Anatomical demonstrations affirmed the animal spirit basis to generation. They also affirmed perceptions that male and female organs of generation were mechanistic, self-willed, and vivified by animal spirits. However, the anatomical analogies used for each sex's genitals differed: males sex organs were analogized to syringes, female organs to manikins. These mechanical models became closely associated to those organs through visual demonstration and linguistic metaphor, in both medical and literary writing. Those metaphors took on sexual meanings and cultural uses, especially in erotica and satire. This topic reveals how applying technology to bodies can change medical and social perceptions of both that technology and the body.

Working with cadavers and anatomical specimens functioned as more than just sensory proofs of anatomical relationships or physiological theories. Rather, as I show, preparing dissections and models was crucial to the vocational identities of anatomists and natural philosophers. Such activities were important because they inspired theories, such as mechanical and hydraulic physiologies, that led to further discussions of materialism and vitalism. Further, dissections, prosections, and models had a significant public viewership and interest, which led to the dissemination and proliferation of these generation theories involving animal spirits. There was, I argue, a reciprocal relationship between the culture of sensibility and anatomical demonstrations: constructions of sensibility were substantiated by these anatomical displays of nerves, while the empirical practices of anatomists gained credence from being connected to the culture of sensibility. Part of this relationship between anatomists and literati was the sharing of new and specialized rhetoric for nerve physiology, seed theories, genital mechanics, and sexual conditions. This rhetoric included a regular set of terms, metaphors, topics, and associations adopted by specific literary genres, especially erotic and satirical works.

The third chapter considers sexual pleasure and pain, and how animal spirits were used to explain and construct these sensations. These ideas were often freely discussed in seventeenth- and eighteenth-century texts on generation, midwifery, anatomy, venereal disease. Sexual pleasure and pain were integral to theories of sensitivity, medical moralizing, and basic procreative function. Conception usually required pleasure or orgasm, and venereal disease was characterized by types of pain. Laqueur analyzes pleasure in *Making Sex*, but did so by only considering medical writings. Pleasure was equally as much,

if not more, a literary and philosophical topic as a medical or scientific.⁹⁶ Using physiological principles about animal spirits, Willis and Locke discussed how sexual pleasure significantly impeded rational thought. I show that similar physiological discussions arose relating to Epicureanism, libertinism, sexual morality, and utilitarianism.

Chapter four examines eighteenth-century explanations and representations of sexual and reproductive diseases and disorders in terms of animal spirits. The focus is on how specific genital maladies affected the mind, a relationship exemplified by gonorrhoea and three gestational disorders: pica, maternal impressions, and febricula. All of these maladies involved the loss of animal spirits, which affected the nerves, organs of generation, and mind. Cultural historians have examined many eighteenth-century reproductive disorders, most notably hysteria, masturbation, and impotence. However, gonorrhoea, maternal impressions, febricula, and pica have been researched very little, although they were distinct disorders and then recognized as significant. Additionally, these disorders affected the constitutions, both physically and mentally, in medical discussions and literary representations. The connection between mind and groin described in nerve physiology and sensibility governed medical diagnosis and treatment of, and social attention to, these and other sexual and reproductive conditions. This chapter, therefore, highlights the profound role animal spirit physiology had in eighteenth-century medical practices and social perceptions of sexual and reproductive health.

Conclusion

This dissertation is designed to illustrate how the mind and sexual/reproductive body were understood to be yoked together—often problematically—first within medical discussions and then gaining greater resonance as within the culture of sensibility. The variety of sources, especially medical and literary, used in this research reflect the interdisciplinary history being examined. The topics of each chapter have been chosen because those topics were central in both medical and literary writings that dealt with themes of sex and generation. An idea emphasized in all chapters is that a specific physiology about nerves that emerged in the 1660s became fixed to the culture of sensibility, which rose to prominence in the 1730s. That physiology directed how people understood their wanton thoughts, communicated their personal desires, carried out sexual behaviours, and explained reproductive processes. Only by recognizing that physiological premise can sexuality in sensibility be fully understood. By the 1780s animal spirits had diminished in learned medical discourse and electricity was gaining prominence in nerve experiment and theory. Yet, animal spirits left a lasting impression on literature of sensibility, as the register and principles of that physiological idea continued in early nineteenth-century literary culture.

⁹⁶ See Mark Akenside, *The Pleasures of Imagination...* (London, 1744); Locke, *Essay*; Alexander Pope, *An Essay on Man...* (London, 1734).

Figures: Introduction

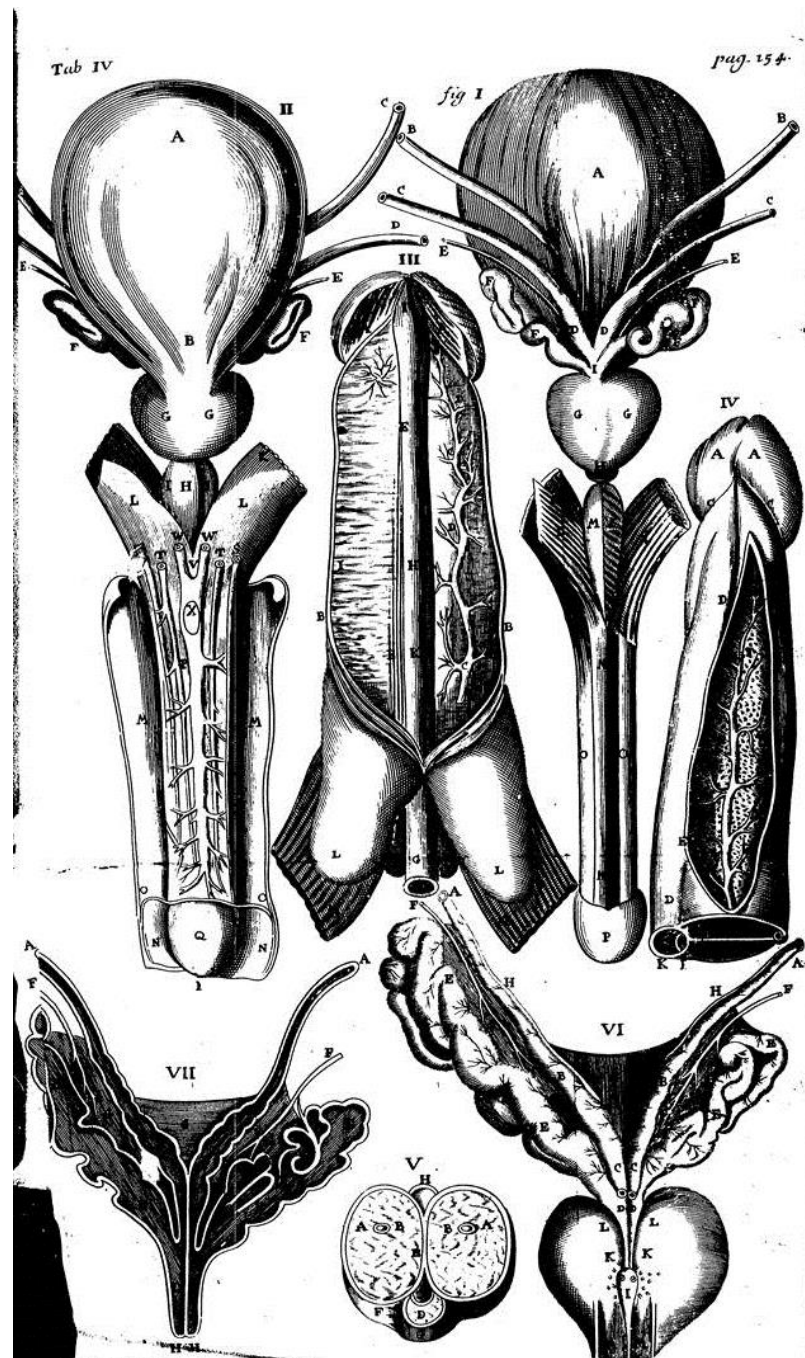


Fig. 0.1 A plate showing the male organs of generation dissected, from Isbrand van Diemerbroeck's *The Anatomy of Human Bodies Comprehending the Most Modern Discoveries and Curiosities in that Art...* translated by William Salmon (London: Edward Brewster, 1689) (originally published as *Anatome corporis humani...* [Utrecht: Sumptibus & typis Meinardi à Dreunen, 1672]).

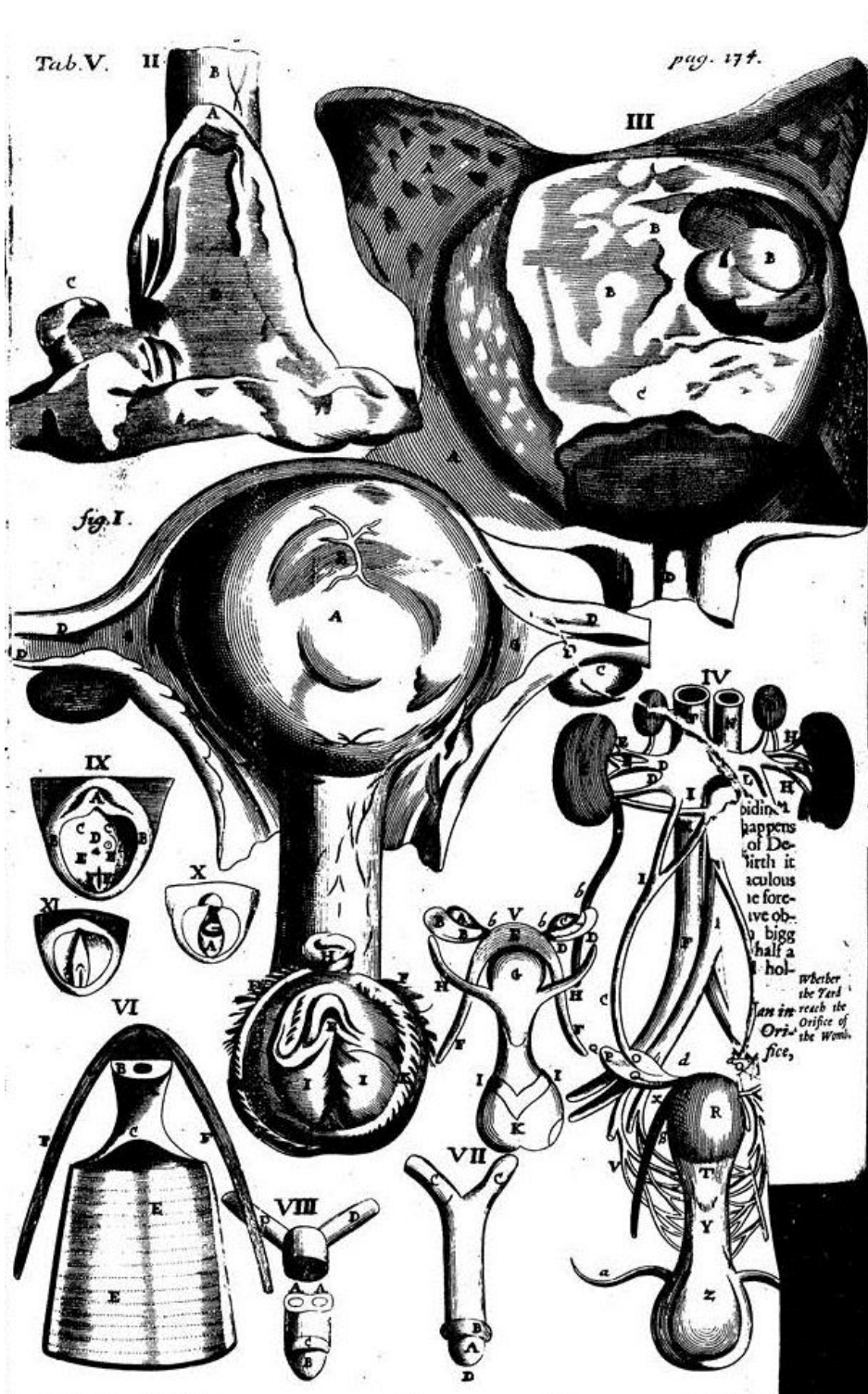


Fig. 0.2 A plate showing the female organs of generation dissected, from Diemerbroeck's *The Anatomy of Human Bodies*.

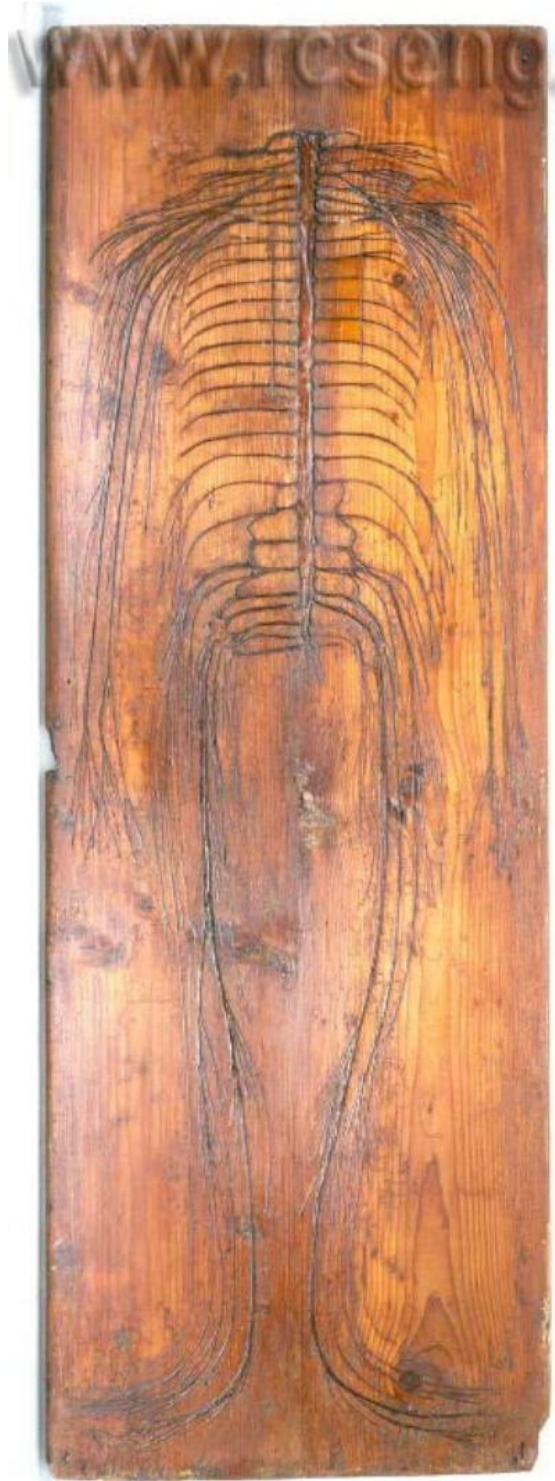


Fig. 0.3 A table with a dry mount of human spinal cord and nerves made by Giovanni Leoni d'Este in Padua, purchased by John Evelyn, brought to London in 1649, gifted to the Royal Society in 1667, and now in the Royal College of Surgeons of England's collection.

Chapter One: Nerve Physiology, Animal Economy, and Generation Theories

What doth soft fires thorow all Bodies throw.
What Spirit nimbly moves the human frame:
Whence Milky juice here, there a Purple stream,
Watering the Body: whence the Crimson flood;
And the quick Circulation of the blood.¹

These prefatory lines to Thomas Willis's *Practice of Physick* (1681) introduce the principal parts of the animal economy or, essentially, human physiology. As the verse outlines, these parts included heats, spirit, milk, and blood in circulation.² The poem's rhetorical questions prime the readers' curiosity, readying them for Willis's explanations of these natural phenomena. In answer to "What Spirit nimbly moves the human frame," Willis, like most physicians and anatomists of the time, affirmed it was animal spirits. Providing sensation and initiating muscular movement, animal spirits allowed the highest intellectual faculty—the soul—to interact with the body. One of the most pronounced yet troubling parts of this (meta) physical relationship between soul and body was how the mind and the genitals related. Animal spirits made this connection; therefore, eighteenth-century medical and cultural discussions about generation and sex centred on those spirits.

Scholarship on eighteenth-century sexuality and reproduction has approached animal spirits with trepidation, hardly broaching the substance despite its importance. In both *Making Sex* and *Solitary Sex*, Thomas Laqueur mentions animal spirits, but fails to provide so much as a working definition. Rather, he offers "fungible fluids" as a term loosely signifying animal spirits, humors, nervous juices, ether, and lymph.³ Such glossing of animal spirits has understated their significance in eighteenth-century understandings of sex and gender. As John Sutton, the philosopher and historian of neurology, explains, "The outstanding scholarship on ancient, medieval, and Renaissance spirits theories... is not matched for spirits in early modern science or culture."⁴ This blind-eye to animal spirits

¹ Thomas Willis, "On the Author's Medical-Philosophical Discourses," in *Dr. Willis's Practice of Physick...*, trans. Samuel Pordage (London: T. Dring, C. Harper, and J. Leigh, 1681) ll. 34-38. The original Latin edition was published in 1659 and included the poem, also in Latin. See Richard Kroll's footnote 26 in "Pope and Drugs: The Pharmacology of *The Rape of the Lock*," *English Literary History* 67, no. 1 (2000): 99-141.

² Likewise, Herman Boerhaave related that "milk is made to pass thro' all the changes of blood, serum, lympha, nervous fluid or animal spirits." Herman Boerhaave, *A New Method of Chemistry* (London, 1727), 181. These basic fluid-like substances of the body were quintessentially related.

³ Thomas Laqueur, *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA: Harvard University Press, 1990), 35.

⁴ John Sutton, *Philosophy and Memory Traces: Descartes to Connectionism* (Cambridge: Cambridge University Press, 1998), 24.

(especially Willis's account of them) in the history of seventeenth- and eighteenth-century generation has led to many oversights and inaccuracies, especially in accounts of how the mind communicated via fluids with, contributed matter to, and received influences from sexual organs. My examination focuses on Willis's work, highlighting how the ideas he communicated about nerves connecting the brain and groin. Subsequent natural philosophers, anatomists, and physicians preoccupied themselves with animal spirits until the end of the eighteenth century. Indeed, animal spirits were understood as the basis for sexual sensations, erotic fantasies, genital embracing, orgasmic pleasure, sperm vigour, menstrual cycles, post-coital conditions, venereal maladies, all sorts of infertility problems, and the steps of generation—seed creation, conception, and gestation. Wider social concerns about sex, including gender difference, population changes, and family inheritance, were often related to the animal spirit economy. Therefore, understanding eighteenth-century generation and sex requires an understanding of animal spirits.

This chapter's first section elaborates further on the physiological role of animal spirits in connecting the soul, brain, and genitalia, especially in relation to generation. In particular, I show that the sensitive and temperamental nature of the organs of generation was a primary cause of upset in the animal economy. The second section examines one of the most important functions of animal spirits, the creation of reproductive seed. This process consumed a substantial amount of animal spirits and, therefore, significantly affected the animal economy and mind. In general, economies have periods of surplus and deficit—the animal economy was no exception.

Animal spirits and generation were also important subjects in non-medical genres, especially erotic and satiric works, which frequently referred to seed and animal spirits theories. As Sutton suggests, "Spirits traversed easy early modern passages between life sciences and literature, physics and philosophy, cognition and cosmology, pneumatology and poetry."⁵ A few decades after natural philosophers and anatomists introduced generation theories based upon animal spirits these ideas became more broadly and culturally relevant. However, it was cultural criticisms and applications of those medical and physiological theories that made them important. Theories on conception and gestation are considered in the third section because they meaningfully incorporated animal spirits and concerns about mental/genital influences. Gender ideologies were also central to discussions of conception and gestation theories and ideas, especially preformationism, epigenesis, animalcules, homunculi, sperm, and eggs.

⁵ *Ibid.*, 27.

“The Immediate Instrument of the Soul:” Animal Spirits

On 24 September 1735, Patrick Darling had a confrontation with Mary Price in Mr. Humphries’s Brandy Shop on Winford Street, London. Accounted as a “mighty joking man,” Darling incited the conflict by teasing Price for having “an Irish Leg,” meaning that her leg is “as thick at bottom as it is at top.” In response, Price “kicked his Privities.” Darling then “gave her a Box on the Ear.” Following this violent reproof, Price called for her cousin, Elizabeth Armstrong, who was “at a Gin shop next Door.” Armstrong lived up to her name by entering the scene brandishing a small oyster knife and threatening to cut the nose off the “Irish Thief.” In the kerfuffle that ensued, Darling received stab wounds to his breast and calf, of which the latter seems to have been the more serious. Their tussle spilled out into the street, where Price cheered Armstrong on with “Kill him, kill him!” When the dust settled, Armstrong quitted the scene and Darling headed back towards the brandy shop. On his way he was accosted by a sailor, with whom “two or three Blows” were passed. Thoroughly spent, Darling was carried to a surgeon, and died a few hours later. Among these many colourful details, which were related at the Old Bailey during the 25 October 1735 trial for Darling’s murder, the medical account from Darling’s attendant surgeon, James Atkinson, is perhaps the most intriguing: “I drest his Wounds, and they were both trivial, but for want of due care, the Hemorrhage of Blood from the Calf of his Leg contributed to his Death, for he was harrassed [*sic*] about for two or three Hours, and no body would take him in. And his Animal Spirits being exhausted, he might be suffocated for want of having his Head laid in a proper position.”⁶ Because his stab wounds seemed so trivial, Atkinson explained Darling’s death as a total physiological collapse—an exhaustion of his animal spirits.

Early eighteenth-century natural philosophy and medicine privileged this ethereal fluid not only as vital physiologically, but as a distinguishing feature of mankind’s upper position in the great chain of being. Circulation and hydraulics explained how animal spirits linked the body and mind through nerves. Anatomists, physicians, and natural philosophers explained many phenomena as consequences of the protean nature of animal spirits, although this understanding was regularly contended. However, Thomas Broman contends, “It was not the possibility of a connection between the soul and the body that critics rejected; voluntary muscular motion, after all, was only one among many phenomena suggestive of some kind of link between them.”⁷ Milk, blood, and lymph were also integral to eighteenth-century generation theories, but they were not granted the special attention and influence

⁶ October 1735 trial of Elizabeth Armstrong and Mary Price, *Old Bailey Proceedings Online* (www.oldbaileyonline.org, version 6.0), ref. t17351015-29.

⁷ Thomas Broman, “The Medical Sciences,” in *The Cambridge History of Science*, vol. 4, “Eighteenth-Century Science,” ed. Roy Porter (Cambridge: Cambridge University Press, 2003), 472.

that animal spirits were. By 1733, George Cheyne could observe that “The Doctrine of Spirits, to explain the animal Functions and their Diseases, has been so readily and universally receiv’d . . . that scarce one (except here and there a *Heretick* of late) has call’d this *Catholick* Doctrine into Question.”⁸ While the importance of heat in reproductive theories was diminishing in the eighteenth century, animal spirit theories gained attention and credibility.

But, this fluid was extremely susceptible to exhaustions and violent upsets following intense exertions, as instanced in Atkinson’s diagnosis. According to William Forster’s *A Treatise on the Causes of Most Diseases Incident to Human Bodies* (1746), the exhaustion of animal spirits could cause sleep,⁹ delirium,¹⁰ abortions,¹¹ and sudden death.¹² Disturbances like fits, passions, convulsions, and shocks incited these exhaustions, which consequently affected the entire human constitution, disrupting mind and body. This delicate animal spirit system was most susceptible to disturbance by the processes of generation. A kick to the privities, a swelling gravid womb, or a sudden arousal, all such events involving genitalia immediately affected the mind and soul through the upward conveyance of animal spirits. Physiological discussions about the relationship between genitalia, nerves, the brain, and the soul explored how much control people had over their sexuality and reproduction.¹³ Sensibility emphasized the susceptibility of people’s nerves and animal spirits to their surroundings, mental states, and bodily conditions. That susceptibility was particularly pronounced in regards to sexuality and reproduction. How easily a wanton thought could arouse, an itching groin could distract, or a lewd sight could allure. Medical and literary discussions about generation consistently referred to the difficulty of controlling these sensitive connections between body, mind, and environment.

The growing attention to sensibility, the fixation on nervous conditions, and the lingering ambiguity concerning how nerves worked allowed the physiological principle of

⁸ George Cheyne, *The English Malady: or, a Treatise of Nervous Diseases of All Kinds...* (London: printed by S. Powell for George Risk, George Ewing, and William Smith, 1733), 53. For Cheyne’s medical influence on the culture of sensibility, see G. J. Barker-Benfield, *The Culture of Sensibility: Sex and Society in Eighteenth-Century Britain* (Chicago: University of Chicago Press, 1992), 5-36.

⁹ William Forster, *A Treatise on the Causes of Most Diseases Incident to Human Bodies*, 2nd ed. (London: printed for J. Clarke, G. Hawkins, and W. Reeves, 1746), 46.

¹⁰ *Ibid.*, 301.

¹¹ *Ibid.*, 137.

¹² *Ibid.*, 353. In a letter to Robert Boyle in 1663, Richard Lower described how “several anatomists” understood that apoplexies were caused by a stoppage of blood to the brain, which meant that “the spirits for want of supply must extinguish, and so all sense and motion perish.” Letter from Richard Lower to Robert Boyle, June 4, 1663, retrieved from *Electronic Enlightenment*.

¹³ See Stephen Gaukroger, *The Collapse of Mechanism and the Rise of Sensibility: Science and the Shaping of Modernity, 1680-1760* (Oxford: Oxford University Press, 2010), 390.

animal spirits to enjoy a renaissance. Following Galenic theory, animal spirits were one of three physiologically precious fluids in the animal economy: the other two being natural spirits and vital spirits.¹⁴ Michael Servetus, a Spanish physician eventually executed by Calvinists in Geneva in 1553, described the three kinds of spirits as follows: “The vital is that which is communicated, by Anastomoses, from the Arteries to the Veins; in which it is called natural: The Blood, therefore, is first; whose Seat is in the Liver and Veins. The vital Spirit is second; whose Seat is in the Heart and Arteries. The animal Spirit is third; which is like a Ray of Light, and has its Seat in the Brain and Nerves.”¹⁵ While the first two spirits faded into obscurity, animal spirits were revived in the late seventeenth and eighteenth centuries. Publications by individuals like René Descartes (1596-1650),¹⁶ William Harvey, Walter Charleton (1619-1707), Willis, Regnier de Graaf (1641-1673), and Thomas Bartholin inspired new consideration of animal spirits. By the turn of the eighteenth century, British anatomists, natural philosophers, and physicians were engrossed in elucidating their elusive nature.

In the eighteenth century, animal spirits were understood as a protean, fluid-like substance, extremely subtle, easily agitated into various motions, and, as Willis wrote, they seemed to move “quicker than the twinkling of an Eye.”¹⁷ Since they were so fine and thin, they remained beyond the scope of visual observation.¹⁸ As an adjective, “animal” conventionally meant “in opposition to *spiritual* and *rational*” and even was “opposed, on the one side, to *intellectual*, and, on the other, to *vegetable*.” Yet, “animal” also referred to

¹⁴ For a short history of animal spirits, see Roger Koppl, “Retrospectives: Animal Spirits,” *The Journal of Economic Perspectives* 5, no. 3 (1991): 203-10.

¹⁵ Quoted in Charles Nicholas Jenty, *A Course of Anatomico-Physiological Lectures on the Human Structure and Animal Oeconomy* (London: printed for James Rivington and James Fletcher, 1757), 1: preface, c. Under the term “Faculty,” Thomas Blount neatly differentiated animal, vital, and natural faculties. The animal faculty “sends feeling and motion to all the body, from the brain by sinews, and nourisheth the Understanding;” the vital faculty “gives life from the heart by Arteries to all the body;” and the natural faculty “gives nourishment to all the parts of the body, from the Liver by Veins.” Thomas Blount, *Glossographia, or, A Dictionary Interpreting All Such Hard Words* (London: printed by Tho. Newcombe for George Sawbridge, 1661).

¹⁶ Sutton suggests that Descartes “resolutely corporealised animal spirits.” Sutton, *Philosophy and Memory*, 44.

¹⁷ Thomas Willis, “Of Fermentation,” in *Dr. Willis’s Practice of Physick...* (London: T. Dring, C. Harper, and J. Leigh, 1684), 12.

¹⁸ According to the medical author Malcolm Flemming, “The animal spirits... are as it were the quintessence of the blood and other juices; the vehicle of which is lymph or water, extremely desæcated and moveable, and extremely attenuated by flowing thro’ vessels ... rarefied by heat, and approaching nearer to the nature of vapour, than that of a sensible fluid ... and imperceptible to all our senses.” Malcolm Flemming, *The Nature of the Nervous Fluid, or Animal Spirits, Demonstrated...* (London: printed for A. Millar, 1751), preface: vii-viii.

the lower functions of the mind,¹⁹ a definition more reflective of *animal* spirits. However, topics that gripped eighteenth-century thought and inquiry, such as imagination, pleasure, pain, will, and memory, were all considered lower, animal faculties. “Spirit” had a much broader meaning that complicated the idea of animal spirits.²⁰ Samuel Johnson provided nineteen different descriptions of “spirit,” including a few that closely connected spirit with sensibility. One such entry concisely sums up spirit as “sentiment, perception.”²¹ The relationship between sensibility and animal spirits had been described even more explicitly by Willis, who contended that “for that every Sense is a certain passion, wherein the Soul, or some portion of it, being outwardly struck, is forced to nod or shake, and a wavering of the Spirits being inwardly made to look back towards the Head.”²² Physiological formulations such as Willis’s positioned animal spirits as the medium through which sensation and sensibility occurred.

The most in-depth survey of eighteenth-century nerve theories was offered by the Locke scholar John Yolton in his *Thinking Matter*, which examined animal spirits along with “brain traces,” subtle elastic fluid, and vibrations.²³ Yet, Yolton gave equal attention to these alternative nerve theories, misrepresenting the greater importance of animal spirits. As evidenced by the greater number of writings about and references to animal spirits, adjunct theories about nerves as strings that acted like pulleys or vibrated did not achieve the widespread acceptance or cultural resonance that animal spirits did. Less mechanical and more vitalist, animal spirits explained a greater variety of phenomena and, consequently, prevailed as the dominant theory for nerve physiology for the majority of the eighteenth century. Unlike other theories, animal spirits had historical credibility and offered a convincing account of the interaction between a metaphysical soul and a physical body. However, they continually eluded direct observation; animal spirits were always slightly

¹⁹ Samuel Johnson, *A Dictionary of the English Language...* (London: printed by W. Strahan for J. and P. Knapton et al., 1755), 1: s.v. “Animal.”

²⁰ *Ibid.* 2:, s.v. “Spirit.”

²¹ *Ibid.*

²² Willis, “Of Muscular Motions,” in *Dr. Willis’s Practice*, 28.

²³ John Yolton, *Thinking Matter: Materialism in Eighteenth-Century Britain* (Oxford: Basil Blackwell, 1984). Yolton associated the vibration theory of nerves with Hartley; however, many serious discussions of nerve vibration mechanisms preceded Hartley’s theories. Notably, George Cheyne’s musician/musical instrument analogy for nerve mechanisms relies on vibrations. Likewise, Willis and Descartes used musical instrument analogies for nerves that incorporated vibrating actions. See Wes Wallace, “The Vibrating Nerve Impulse in Newton, Willis, and Gassendi: First Steps in a Mechanical Theory of Communication,” *Brain and Cognition* 51, no. 1 (2003): 66-94. Later, Julien Offray de La Mettrie also described a similar mechanism in *Man a Machine; Translated from the French of the Marquiss D’Argens* (London: W. Owen, 1749), 26.

beyond the scope of the eye and detection by the senses.²⁴ Therefore, their qualities were deduced from their supposed functions rather than directly observed: they were ethereal because they interacted with both the soul and body; they moved extremely quickly because sensations and movements were quickly communicated; they were a precious bodily fluid because they were unique to animal life. In relation to generation, animal spirits reflected the fineness of seed, the spontaneous motions of genitalia, the parental endowment of the soul to the fetus, and the exquisite feeling of sexual pleasure.

Literary authors also explored animal spirits and generation at this time. The London physician and man of letters, Samuel Garth, wrote the mock-heroic *The Dispensary* (1699), which attacked money-grubbing apothecaries.²⁵ The poem begins with the pursuit of an elusive Nature, who is revealed through a scene of generation. Described in epigenesist terms, this scene details how

infant Atoms kindling into life;
How ductile Matter new Meanders takes,
And slender trains of twisting Fibres makes.²⁶

In this wondrous moment of procreation, Garth asks a series of grand questions, faintly reminiscent of Willis's prologue:

Whence their mechanick pow'rs the Spirits claim,
How great their force, how delicate their Frame:
How the same Nerves are fashion'd to sustain
The greatest Pleasure and the greatest Pain.²⁷

²⁴ Walter Charleton described how "no part of an Animal can be thought capable of such easie and expedite *Mobility*, but the *spirits*, which flow through the body in less than the twinkling of an eye: and therefore, we conclude, that They are the Immediate instrument of the soul, in voluntary motion." Walter Charleton, *Natural History Nutrition, Life, and Voluntary Motion...* (London: printed for Henry Herringman, 1659), 187. Willis gave the following physiological system for the creation and movement of spirits: "As the Blood in the Heart, and appending Vessels, the Chyle in the Ventricle, so the Animal Spirit is wrought in the Brain, whose Original and Motions are very much in the dark. Neither doth it plainly appear, as to the Animal Spirit, by what workman it is prepared, nor by what Channels it is carried, at a distance, quicker than the twinkling of an Eye." Willis, *Medical Philosophical Discourse*, 12.

²⁵ For the dispensary controversy, see Albert Rosenberg, "The London Dispensary for the Sick-Poor," *Journal of the History of Medicine and Allied Sciences* 24, no. 1 (1959): 41-56; John F. Sena, "Samuel Garth's *The Dispensary*," *Texas Studies in Literature and Language* 15, no. 4 (1974): 639-48; Stephen J. Ackerman, "The 'Infant Atoms' of Garth's 'Dispensary'," *The Modern Language Review* 74, no. 3 (1979): 513-23; Elizabeth Lane Furdell, *Publishing and Medicine in Early Modern England* (Rochester, NY: University of Rochester Press, 2002), 190-92.

²⁶ Samuel Garth, *The Dispensary. A Poem. In Six Canto's*, 10th ed. (London: J. and R. Tonson, 1699), 2.

²⁷ *Ibid.*, 2, 3.

Shortly after, the poem poses two more sets of questions that resonated throughout eighteenth-century literature: “How Body acts upon impassive Mind”²⁸ and “Why our Complexions oft our Soul declare, / And how the Passions in the Features are.”²⁹ This first question is about sensitivity, nerves, and animal spirits in the body influencing thought and behaviour. The second question considers the opposite direction of influence—thoughts and emotions affecting (and being expressed in) the body. Both questions were central concerns in the culture of sensibility: both relied on animal spirits, and both were most pronounced when sex was involved.

In the culture of sensibility, as scholars such as Barker-Benfield emphasizes, those with delicate nerves felt and expressed more profoundly.³⁰ The Georgian poet and physician John Armstrong wrote how people “With quicker Sense you shall, and firmer Nerves, / Return to Love, when Love again invites.”³¹ But, having this greater sensibility in nerves and love could also prove detrimental. In Oliver Goldsmith’s celebrated sentimental novel, *The Vicar of Wakefield* (1766), the deserving Sir William Thornhill in the guise of the commoner Mr. Burchell, relates how “Physicians tell us of a disorder in which the whole body is so exquisitely sensible, that the slightest touch gives pain: what some have thus suffered in their persons, this gentleman felt in his mind. The slightest distress, whether real or fictitious, touched him to the quick, and his soul laboured under a sickly sensibility of the miseries of others.”³² These pathological and generally medical ideas about nerves and animal spirits acting between the mind and body were major mid-century literary themes. In fact, animal spirits gained greater recognition because of the rise of sensibility, their application in generation theories, and the increased interest in nerves.

A perception shared by rationalists and empiricists was that “the Soul is a rational, intellectual Faculty, void of Materiality, and immortal in its Nature.”³³ In order to serve in the liminal role as the “Immediate instrument of the Soul,”³⁴ animal spirits had a very fine, highly rarified, fluid-like, subtle, ethereal, and extremely thin composition. They were material perfected to the point of immateriality, to the very cusp of corporeality, as nearly to the metaphysical nature of the spiritual soul as possible. As Jacques Roger noted, faculties

²⁸ *Ibid.*, 3.

²⁹ *Ibid.*, 4.

³⁰ G. J. Barker-Benfield, introduction to *The Culture of Sensibility: Sex and Society in Eighteenth-Century Britain* (Chicago: University of Chicago, 1992), xvii-xviii.

³¹ John Armstrong, *The Oeconomy of Love*, 5th ed. (Dublin, 1742 [orig. 1736]), 22.

³² Oliver Goldsmith, *The Vicar of Wakefield* (Oxford: Oxford University Press, 1999 [orig. 1766]), 21.

³³ *A Philosophical Essay on Fecundation: Or, an Impartial Inquiry into the First Rudiments, Progression and Perfection, of Animal Generation...* (London: J. Roberts, 1742), 43.

³⁴ Charleton, *Natural History*, 497.

and souls had a highly equivocal relationship with spiritual soul.³⁵ Yet, this near relationship between the animal spirits and the soul explained the communication of the soul's commands to the body.³⁶ The anonymous author of the 1742 tract *A Philosophical Essay on Fecundation* thought it necessary to reprimand those “who have endeavour'd to confound the Soul with the animal Spirits, or to swallow it up in the Spirits, by pretending to prove, that they are the same thing—because (as they assert) the animal Spirits are a Quality purely ethereal, absolutely void of Materiality.”³⁷ Claiming the soul could be empirically described and known was heretical.³⁸ Yet, the same author, like many others, struggled to demarcate the thin line separating animal spirits from the soul.³⁹

Fixing the production of animal spirits in the brain put them in immediate proximity to the seat of the soul. But, exactly where in the brain the spirits were produced was a point of heated contention: Willis proposed the cerebellum,⁴⁰ Bartholin the “*Rete Mirable*” and “*Plexus Choroides*,” and the Dutch anatomist, Herman Boerhaave, understood it to be the cerebral cortex.⁴¹ He also contended that Galen had erred in believing that “the Cavities of

³⁵ Jacques Roger, *The Life Sciences in Eighteenth-Century French Thought*, ed. Keith R. Benson, trans. Robert Ellrich. (Stanford: Stanford University Press, 1997), 74. Sutton likewise describes how “the diversity and adaptability of these doctrines is the point, for there are no clear lines between the strands which developed into intelligible later theory in theology or physiology and those which resonate only with pre-modern mentalities.” *Philosophy and Memory*, 32.

³⁶ “The intimate connection between spirits and soul explains the instantaneous effects of the soul's commands.” *Ibid.*, 163. Marmaduke Berdoe described how “modern authors... have confined the immortal soul to the head, and the sensitive or animal to the præcordial region.” Marmaduke Berdoe, *An Essay on the Nature and Causes of the Gout, with a few Conjectures on the Probability of its Cure* (Bath, 1771), 2.

³⁷ *Philosophical Essay on Fecundation*, 42.

³⁸ Sutton, *Philosophy and Memory*, 34. “But when other argued that the spirits were physical, the way was open for medical materialists to combine these moves and heretically identify the soul itself with corporeal spirits.”

³⁹ *Ibid.*, 33. “‘Spirit’ alone could refer, not just to the Holy Spirit... but also to the individual soul as locus of moral evaluation, or to the immortal soul, locus of personal survival beyond bodily death.”

⁴⁰ Willis described that “when from the Vessels, on every side watering the *Cortex* of the Brain, the subtil Liquor is plentifully instilled for the matter of the Animal Spirits, this flowing inwardly stuffs all the pores and passages of the Brain, and so excludes for that time the Spirits from their wonted tracts and orbs of expansion.” Willis, “Of the Anatomy of the Brain,” in *Dr. Willis's Practice* (1684), 79.

⁴¹ Herman Boerhaave, *Dr. Boerhaave's Academical Lectures on the Theory of Physic...* (London: W. Innys, 1745), 4: 285. Boerhaave's work was originally published as *Institutiones medicae...* (Leiden, 1708). Affirming Boerhaave's system, Nathan Bailey's definition for “NERVOUS Juice or Spirit” reads as follows “a pure, subtil, volatile Humour, commonly called the Animal Spirits; secreted from the arterial Blood in the cortical Part of the Brain, collected in the *medulla oblongata*, and driven thence by the force of the Heart, into the Cavities of the Nerves, to be by them convey'd throughout the Body, for the purposes of Sensation and Animal Motion.” Nathan Bailey, *Dictionarium Britannicum: Or a More Compleat Universal Etymological English Dictionary than Any Extant* (London, 1730).

the Ventricles were filled with animal Spirits, which,” according to the 1740s translation of Boerhaave’s 1708 *Institutiones medicae*, “we demonstrate to be perpetually moved in close Vessels.”⁴² Such quibbling over insupportable details elicited satirical criticisms. One such criticism came in the form of Laurence Sterne’s empirically minded character, Walter Shandy. Nearing the birth of his son, Walter pedantically espouses theories about delivering babies without damaging their delicate “fountain of sense.” Walter explains, “The chief *sensorium*, or headquarters of the soul, and to which place all intelligences were referred, and from whence all her mandates were issued,—was in, or near the *cerebellum*,—or rather somewhere about the *medulla oblongata*, wherein it was generally agreed by Dutch anatomists, that all the minute nerves from all the organs of the seven senses, concentrated.”⁴³ Sterne’s quip about esoteric and speculative debates of anatomists shows how some nerve theories were known and scrutinized by the reading public. It also shows that literary representations mirrored earlier medical theories, which described sensibility as an acute sensitivity to the human soul dependent on the animal economy. Therefore, something of the soul was endowed during the heavenly moments of sexual acts. “When instantly Phoebe grew more composed, after two or three sighs, and heart-fetched Oh’s! and giving me a kiss that seemed to exhale her soul through her lips, she replaced the bedclothes over us.”⁴⁴

Beyond the different views about some finer neurological details, eighteenth-century anatomists and physiologists generally agreed that the brain was the “fountain of sense,”⁴⁵ the “fountain of motion,”⁴⁶ and “the workshop and repository of the spirits.”⁴⁷ Sterne also wrote about this notion, and in a fairly serious and contemplative tone.

—Dear sensibility! source inexhaustible of all that’s precious in our joys, or costly in our sorrows! thou chainest thy martyr down upon his bed of straw—and ’tis thou who lifts him up to HEAVEN—eternal fountain of our feelings!—’tis here I trace thee—and this is thy divinity which stirs within me... all comes from thee, great—great SENSORIUM of the world! which vibrates, if a hair of our heads but falls upon the ground.⁴⁸

⁴² Boerhaave, *Dr. Boerhaave’s*, 248.

⁴³ Laurence Sterne, *The Life and Opinions of Tristram Shandy, Gentleman*, in *The Florida Edition of the Works of Laurence Sterne*, eds. Melvyn New and Joan New (Gainesville: University Press of Florida, 1978), 1: 174-75.

⁴⁴ Cleland, *Fanny Hill*, 50.

⁴⁵ John Burton, *The History of Eriander* (London: printed by R. Davenport for John Williams, 1661), 74.

⁴⁶ *Ibid.*, 76.

⁴⁷ Locke, *Thomas Willis’s*, 66.

⁴⁸ Laurence Sterne, *A Sentimental Journey through France and Italy*, in *The Florida Edition of the Works of Laurence Sterne*, eds. Melvyn New and Joan New (Gainesville: University Press of Florida, 2002), 6: 155.

The “fountain of our feelings” Sterne described, like the “fountain of sense” Boerhaave described, was in the brain. Yorick’s panegyric on sensibility emphasizes those physical effects and ethereal qualities that were understood to rely upon animal spirits.

The nearness of these spirits to the soul was likewise apparent in their composition. They were tempered,⁴⁹ rarified, refined vital spirits from arterial blood,⁵⁰ sometimes mixed with air.⁵¹ Willis heavily analogized animal spirits with alcohol fermentation and often blended both terminology and concepts, as in his description of animal spirits being “distilled in the brain.”⁵² Some anatomists considered the watery fluid in the cerebral ventricles, most likely cerebral spinal fluid, to be the animal spirits. Yet, physiological models, such as one proposed by Bartholin, held that some ventricular fluid was excremental, comprising of phlegm and water, further suggesting that animal spirits were not simply a kind of cerebral fluid.⁵³ According to Willis, “spirits designated for such involuntary functions as respiration, pulse rate, digestion, excretion and others.”⁵⁴ They were produced through rarefaction of blood that had been heated,⁵⁵ fermented, and vitalized by the heart.⁵⁶ In turn, animal spirits instigated the heart pulsations needed for heating and circulating the blood. A circulatory

⁴⁹ Some authors say cooled vital spirits, others heated.

⁵⁰ Sutton, *Philosophy and Memory*, 45. “Spirits, on almost all accounts, derived in some way from blood.”

⁵¹ Such was the opinion of Thomas Bartholin, *Bartholinus Anatomy made from the Precepts of his Father, and from the Observations of all Modern Anatomists, together with his Own...* (London: John Streater, 1668), 135.

⁵² John Locke, *Thomas Willis’s Oxford Lectures*, comp. Richard Lower, ed. Kenneth Dewhurst (Oxford: Sandford Publications, 1980), 54. Gideon Harvey gave a similar descriptive metaphor: “In like manner I do suppose, that the *Nervous Lympha*, which is the Vehicle, and containing Liquor of the Animal Spirits, is always flowing or dripping from the Brain, and *Medulla Spinalis* to most parts of the Body through the Nerves; and cannot be supposed to return back again naturally, which therefore must of necessity extreamly swell, and stiffen the Nerves, unless received and disburden’d by some other Vessels, which in all probability must be *Lymphae-ducts*, containing in substance, tenuity, clearness, penetrative vertue, and other qualities, a *Lympha* not unlike the gleet, that distills from a wounded nerve.” Gideon Harvey, *The Vanities of Philosophy & Physick Together with Directions and Medicines Easily Prepared by any of the Least Skill* (London, 1699), 19. Others, such as Salmon, adopted alcohol fermentation models to explain seed and animal spirit processes. William Salmon, *Ars Anatomica: or, the Anatomy of Humane Bodies...* (London: I. Dawks and D. Browne, 1714), 371.

⁵³ See Bartholin, *Bartholinus Anatomy*, 37.

⁵⁴ Locke, *Thomas Willis’s*, 66.

⁵⁵ The glossary to *Dr. Willis’s Practice* (1684) defines rarefaction as “a making of any thing rare or thin” and defines fermentation as “A fermenting or working, like leaven.” This analogy with brewing alcoholic beverages informs much of Willis’s ideas on animal spirits and fluid-based physiology: “nature of these spirits is analogous and proportionate to the spirits in wine and other liquors.” Locke, *Thomas Willis’s*, 57.

⁵⁶ Willis commented: “truly the Blood when Rarified by Heat, is carried from the Chimny of the Heart, to the Head.” Willis, “Of Fermentation,” in *Dr. Willis’s Practice*, 12. cf. Bartholin, *Bartholinus Anatomy*, 135. Bartholin contended that “the Animal spirits cannot be generated, unless the vital Spirits be first cooled.”

model was also applied to animal spirits, wherein they would feed back to the heart, activate coronary pumping, then flow to the diaphragm, and cause breathing motions.

Circulation theories concretized the perception of animal spirits as a material nervous juice flowing through the body in a regulated and definable manner. “But since these muscular *Motion* are excited by means of the Spirits or Juice of the Nerves, propelled from the Brain into the Muscles,” reasoned Boerhaave, “it is therefore evident that the Spirits have a free Course from their Origin in the Brain, from every Point thereof, even to the Muscles which are under the Influence of the Will.”⁵⁷ When these animal spirits are not in motion, he further suggested, unconsciousness occurs, whether in a fainting swoon or in purposed sleep.⁵⁸ Explaining the mental effects of smoking and drinking, Willis argued “that the animal spirits, being as it were intoxicated by the Narcotick sulphur, are in their whole Government very much distracted, and forced into disorders.”⁵⁹ Historian Emily Booth describes how anatomists were “guided by a concern to discover the physical evidence of a hydraulic system for the conveyance of spirits,”⁶⁰ reflecting significant mechanistic influences in physiology. A fluid mechanism was also suggested by the royalist physician and natural historian Walter Charleton, who described how animal spirits cause muscle movement: “The Animal Spirits, whose subtility makes them to approach neerer to the nature of the Soul, and whose sudden influx through the Nerves, into the body of the Muscle, causeth a swelling or distention, and so a contraction thereof, and consequently a change of Figure in the member.”⁶¹ The soul, as the “Regulating Faculty,”⁶² impressed itself upon the fine and sensible animal spirits, which moved through the nerves, and mechanically passed on the soul’s commands to the body’s muscles. Notably, Charleton’s description of “swelling and distention” also readily evokes the swell of aroused genitalia.

Erections, particularly erecting penises, were regularly used as examples of how animal spirits incited movement and confounded volition. In the mid-eighteenth century, the French physician Julien Offray de La Mettrie published *L’homme machine* (1748) with several English translations immediately following. In that text, he discussed involuntary actions, particularly in terms of animal spirits and nerves. By then an established fact, La Mettrie rhetorically asked: “And where is the wonder that the body when in health should be subservient, for how can it resist that torrent of blood, and all those spirits which are ready to

⁵⁷ See Boerhaave, *Dr. Boerhaave’s*, 246. Boerhaave also discussed the location and workings of the Sensorium.

⁵⁸ *Ibid.*, 281.

⁵⁹ Willis, “Pharmaceutice Rationalis, the First and Second Part,” in *Dr. Willis’s Practice* (1684), 141.

⁶⁰ Emily Booth, “*A Subtle and Mysterious Machine:*” *the Medical World of Walter Charleton (1619-1707)* (Dordrecht: Springer, 2005), 106.

⁶¹ Charleton, *Natural History*, 186.

⁶² *Ibid.*, 190.

force obedience, the will having for its ministers and invisible army of fluids, always ready to received its orders, and as quick as lightening in the execution of them! But as it is by the nerves that the power of the will is exercis'd, so is it likewise by them that it is oftentimes check'd."⁶³ Animal spirits could both enact an individual's will and check the will. One of his main examples of animal spirits operating outside of the will was penises: "The erecting muscles make a man's yard stand, as may be seen likewise amongst quadrupeds, and even in an infant when this part is ever so little irritated? And this by the by, proves that there is a particular spring in this member, as yet, but little understood, which produces effects that have not been thoroughly explained, notwithstanding all the boasted insight into anatomy."⁶⁴ The spontaneous action of penile erection, according to La Mettrie, also revealed how the mind, especially imagination, involuntary caused bodily feelings and movements. La Mettrie further queried, "Why does the sight, nay the very thinking of a fine woman, raise in us particular motions and desires? Does what happens at this juncture in certain organs, proceed from the nature of the organs themselves? Not at all, but from that communication and kind of sympathy which these muscles have with the imagination."⁶⁵ Sexual imaginings were impressed onto the animal spirits in the brain, sending them tumultuously down the spinal nerves, and filling the cavernous bodies of the penis or clitoris with blood until they were turgid.⁶⁶

In fact, signs of arousal reflected both the nature of animal spirits and the delicacy of sensibility. "When a Man caresses his Wife," Marten described, "he perceives his Spirits and all Parts touch'd in a moment; it affects his Head, Eyes, causing them to wink and twinkle, his Thoughts, Speech, Limbs, &c."⁶⁷ Arousal, like other response in a sensible body, was a response in the animal spirits. Therefore, as much as an erection could be a voluntary act, so too could it be involuntary. From the 1660s until the end of the eighteenth century, genitalia frequently crop up as examples in discussions about how animal spirits, body mechanics, rational will, and sensibility worked.

Animal spirit theories deviated from the purely mechanical physiologies, such as proposed by La Mettrie. Sergio Moravia suggests that these man-as-machine models, called

⁶³ La Mettrie, *Man a Machine*, 64.

⁶⁴ *Ibid.*, 60. In further considering involuntary actions, La Mettrie mused, "Men of greater genius have not made use of it in accounting for the action of the heart, the erection of the *Penis*, &c. We need only read *Boerhaave's* physical institutions" (69).

⁶⁵ *Ibid.*, 61.

⁶⁶ *Ibid.*, 33: "the imagination seems to be perpetually ready to take wing. Hurried with incessant rapidity by the vortex of the blood and animal spirits, one undulation makes an impression, which is immediately effaced by another; the soul pursues it, but often in vain."

⁶⁷ John Marten, *Gonosologium Novum: or, a New System of all the Secret Infirm and Diseases, Natural, Accidental, and Venereal in Men and Women* (London, 1709), 23.

iatromechanism, reduced human physiology to anatomy.⁶⁸ More precisely, iatromechanism described physiology in terms of mechanical systems applied to anatomy. People with only rudimentary knowledge of physiology professed understandings similar to John Gordon's: "Now I know from Anatomy, that my Body is a Machine."⁶⁹ However, such reductionist descriptions could not account for involuntary actions, like those queried by Garth. Most did not deny "Volition or Self-motion" as Gordon had.⁷⁰ Rather, support for animal spirit theories grew because they allowed for spontaneous and involuntary motion.⁷¹ External stimulation, such as a knock on the knee, or internal influences, such as a fermentation in the womb or spleen, sidestepped the brain's involvement by directly agitating the animal spirits, which, in turn, radiated involuntary motions either locally or throughout the body. Mental shocks could induce the same involuntary motions and responses in the body. Literary authors earnestly endeavoured to dramatize thoughts and feelings by showing "the Passions in the Features" of sensible characters. When Fanny Hill was abandoned in London by her guide Esther Davis, Fanny confessed that she "was so confounded, so struck, that I had not spirit or sense."⁷² Such a shock left Fanny "stupid and mute."⁷³ In Goldsmith's *The Vicar of Wakefield*, a moment of crisis occurs when the vicar's daughter, Sophia, nearly drowns. The event overwhelms the vicar's mind and body: "My sensations were even too violent to permit my attempting her rescue: she must have certainly perished had not my companion, perceiving her danger, instantly plunged in to her relief."⁷⁴ Being spontaneously compelled by animal spirits was common in sensibility literature and medicine.

This spontaneity or involuntary motion was seen as especially common to and problematic for genitalia. Animal spirits represented a continuance of Hippocratic vitalist ideas within an increasingly dominant mechanical philosophy. Booth suggests this mix of vitalism and mechanism was because "English physiology was founded on Harveian methodological principles, and empirical researches tended to encourage retention of the idea of active faculties within matter, and led away from stricter Cartesian mechanism."⁷⁵

⁶⁸ Sergio Moravia, "From Homme Machine to Homme Sensible: Changing Eighteenth-Century Models of Man's Image," *Journal of the History of Ideas* 39, no. 1 (1978): 45-60.

⁶⁹ John Gordon, *A New Method of Demonstrating from Reason and Philosophy the Four Fundamental Points of Religion* (London: A. Millar, 1756), 46.

⁷⁰ *Ibid.*, 56.

⁷¹ Animal spirits were often described in non-materialist terms, such as "diradiation," which likened the muscle-activating power of animal spirits to the diffusion of light. See both John Ash's and Nathan Bailey's definitions for "diradiation." John Ash, *The New and Complete Dictionary of the English Language...* (London: Edward and Charles Dilly, 1775), vol. 1; Bailey, *Dictionarium Britannicum*.

⁷² John Cleland, *Fanny Hill; or Memoirs of a Woman of Pleasure*, ed. Peter Wagner (London: Penguin, 2001 [orig. 1748-9]), 42.

⁷³ *Ibid.*

⁷⁴ Goldsmith, *Vicar of Wakefield*, 22.

⁷⁵ Booth, "Subtle and Mysterious Machine," 186.

Even the late seventeenth-century writings of Charleton highlight this problematic blend of strict mechanism and vitalism in physiology. An ardent supporter of William Harvey, Charleton tentatively proposed that body parts had the power to affect their own motions, without the influence of animal spirits. “Reason adviseth us, henceforth to lay aside that opinion of Des Cartes, and his disciple, Regius, (both great Philosophers, and in many other things worthy to be followed) that the influx of Animal spirits by the nerves, is necessary to the performance of all Naturall Motions and actions done in the body: and to take up the more probable one of Dr. Harvey, that each Natural action is effected by the part doing it, merely in respect of a certain sense.”⁷⁶ In Charleton’s estimation, most movement was involuntary. He described “Natural action” similar to a reflex, wherein sensations prompted a limb to extend or an appendage to twitch without the express involvement of the mind. The body part instigated its own movement without the influence of animal spirits.⁷⁷ Yet, in considering the connection of the soul to the brain and body, Charleton conceded that animal spirits must be the intermediary. He acknowledged that “the *transmission of the Animal Spirits from the Brain* the principal throne of the Soul... [is] the immediate and proper instruments of Motion Voluntary,” which carry the commands of the mind.⁷⁸ His eventual conclusion was shared by many early eighteenth-century natural philosophers, who generally thought animal spirits were the agent for voluntary movement.

For most, the mechanism for voluntary movement—the stirring or agitation of animal spirits by the soul—was similar for involuntary movement; except that animal spirits were stirred by something other than the soul.⁷⁹ This exception was particularly noted by Willis in respect to the penis. In describing the spinal nerves, he stopped to observe that

two other Nerves proceed, which are carried into the Yard, *Fig. 11. l.*

m. The greater of these, which is very large and long, is distributed into the nervous Body of it; the other lesser, into its Muscles. This member, because it receives nerves only from the spinal Marrow, according to our

⁷⁶ Charleton, *Natural History*, 124.

⁷⁷ “As for the *Generation of Animal spirits*; Dr. Harvey hath upon good reasons mad it doubtfull, whether there be any such or not: and if there be, certainly they consist only of the purest and most subtile parts of the blood, and not of Aer.” Charleton, *Natural History*, 146-7.

⁷⁸ *Ibid.*, 182. See Allison Muri, *The Enlightenment Cyborg: A History of Communications and Control in the Human Machine, 1660-1830* (Toronto: University of Toronto Press, 2007), 46.

⁷⁹ For short histories of involuntary motion and nerves, see Erwin Ackerknecht, “The History of the Discovery of the Vegetative (Autonomic) Nervous System,” *Medical History* 18 (1974): 1-8; and J. N. Langley, “Sketch of the Progress of Discovery in the Eighteenth Century as Regards the Autonomic Nervous System,” *The Journal of Physiology* 50, no. 4 (1916): 225-58. Gaukroger also discusses eighteenth-century inquiries into involuntary motion, especially in reference to Haller’s work, although he does not mention specific physiological ideas about nerves and animal spirits. *Collapse of Mechanism*, 396-400.

Hypothesis, ought to swell up and to be moved only at the spontaneous pleasure of the will: but that oftentimes, by reason of the swelling up of the Genital seed or humor, it is erected and blown up with Spirit, whether one will or no.⁸⁰

Genitals, their movement and feelings, defied the regular command of the will because, as Willis explained, they had a special sensitivity to and dependence on animal spirits. Cleland noted this special relationship between the genitals and animal spirits. Far surpassing any other mental or physical sensation or shock, stimulated genitals threw animal spirits into total chaos, causing extreme involuntary movements: “She now threw her legs and arms about at random, as she lay lost in the sweet transport; which on his side declared itself by quicker, eagerer thrusts, convulsive grasps, burning sighs, swift laborious breathings, eyes darting humid fires: all faithful tokens of the imminent approaches of the last gasp of joy.”⁸¹ This scene relates to Nikolai Detlef Falck’s description: “The sense of this [the moment of penetration] is exquisite, and sets as it were the whole muscular fabric in agitation, almost involuntarily.”⁸²

Other authors made similar observations about self-moving female organs of generation. Wombs, vaginas, and clitorises affected self-movement expressing their own sexual appetites, as did male members.⁸³ These understandings raised a particular problem about sexuality and volition: why does arousal seem to occur spontaneously and beyond the control of human will? The phenomenon of arousal was certain proof that animal spirits caused erections, both voluntary and involuntary.

Perhaps the most frequent objection to animal spirit physiologies was the speed at which they supposedly travelled through the nerves. Malcolm Flemming’s *The Nature of the Nervous Fluid, or Animal Spirits, Demonstrated* (1751) addressed the “grand difficulty in muscular motion, to wit, that concerning its quickness and celerity.”⁸⁴ Likewise, in William Hunter’s mid-eighteenth-century lecture notes he hesitated to discuss cerebral spinal fluid as animal spirits and admitted his inability to reconcile nerve conduction speed with mechanistic systems of spirits. He reasoned that “it seems almost impossible for a fluid to move wth such Velocity as to convey Ideas.”⁸⁵ Properties such as *volatility* and *elasticity* largely accommodated the animal spirits’ extremely rapid conduction. However, others

⁸⁰ Willis, “Of the Description and Use of the Nerves,” in *Dr. Willis’s Practice* (1684), 140.

⁸¹ Cleland, *Fanny Hill*, 154.

⁸² Nikolai Detlef Falck, *A Treatise on the Venereal Disease...* (London: B. Law, 1772), 61.

⁸³ “The Delights of Venus,” *The Works of the Earls of Rochester, Roscommon, Dorset...* 4th ed. (London: E. Curll, 1714), 151.

⁸⁴ Flemming, *Nature of the Nervous Fluid*, 33.

⁸⁵ William Hunter, *Hunter’s Lectures of Anatomy*, ed. Nell Dowd (London: Elsevier, 1972), 22.

maintained that the quickness of nervous action could be explained through hydraulic principles.

Several British experimenters in the mid-eighteenth century sought to solve the problems with animal spirit theories. John Caverhill performed a series of experiments on rabbits to discover whether nerves are the source of heat in the body and to establish the velocity of animal spirits, the results from which he published as *Experiments on the Cause of Heat in Living Animals, and Velocity of the Nervous Fluid* (1770). In his first trials, Caverhill used a Fahrenheit thermometer to measure the temperature “between the thigh and belly” of his rabbit subjects then “thrust an awl into the spinal marrow, near the articulation of the last rib, to destroy the nerves going to the hind legs.”⁸⁶ He then kept timed measurements of the temperature in the animals’ hind quarters until the rabbits eventually expired. Caverhill observed, “First, That the rabbits became colder when the connexion between the nerves of the lower extremities and the brain was intercepted. Secondly, That the degree of cold was nearly in proportion to the number of nerves destroyed.”⁸⁷ Having proven that nerves were the source of heat in the body, Caverhill set about trying to manipulate exposed and severed nerves. He further observed that “the muscular motion, excited by driving the nervous fluid out of one inch of nerve, appeared to me to be as numerous as the ordinary excercises [sic] of the animal would have required in one day, and I am convince that the impulse of the will of the animal acting upon the extremities of these nerves in the brain, would not have driven forward the nervous fluid half an inch in performing the same motion.”⁸⁸ Therefore, nervous fluid, according to Caverhill, moves one inch a day.⁸⁹ To maintain the hydraulic paradigm of nerves, Caverhill’s interpretation was that “nerves in a healthy state, are therefore always filled up with fluid.”⁹⁰ “So that,” he reasoned, “when one end of the nervous substance is impelled by the mind, in the brain, the other end in the extremity of the body is instantly driven forwards.”⁹¹ This was the same conclusion Flemming had arrived at some decades earlier.⁹² The will acted like a hammer

⁸⁶ John Caverhill, *Experiments on the Cause of Heat in Living Animals, and Velocity of the Nervous Fluid* (London: printed by G. Scott, 1770), 3.

⁸⁷ *Ibid.*, 31-2. Caverhill theorized that “the heat, which the nerves transmit, seems to arise from the friction excited by the motion of the nervous substance through the nerves” (56).

⁸⁸ *Ibid.*, 49. He further reasoned that “from the slow motion of the substance in the nerves, it appears, why the substance has never yet been seen to issue from divided nerves” (67).

⁸⁹ *Ibid.*

⁹⁰ *Ibid.*, 50.

⁹¹ *Ibid.*, 52. He explained that “the vital power existing in the brains of animals does not compel the nervous fluid to move through the nerves by squeezing their extremities; but that it strikes at the end of the nervous tubes with a stroke so well defined, as to communicate impulse and motion to the substance in the nerves, without affecting the nervous tube” (55).

⁹² Flemming, *Nature of the Nervous Fluid*, 34.

striking nerve endings in the brain, which motion was nearly instantaneously carried through the nerves to the intended muscle or sensory organ.

Another objection to animal spirits was that nerves did not appear to be hollow tubes through which fluids could pass. Some offered other theories, like nerves acting as pulley strings or conveying motion through vibration.⁹³ However, these had even more obvious problems; so animal spirits remained the theory of best fit. By mid-century, Flemming would begin his theoretical physiology treatise with the assumption, “Nerves are hollow canals or tubes, the smallest of all in the animal body, which contain and transmit a peculiar juice or fluid.”⁹⁴ Although many details of animal spirits varied tremendously from author to author throughout the eighteenth century, the basic descriptive terms proposed by late seventeenth-century anatomists and physicians changed very little. What did change were the philosophical and medical concerns that referred to animal spirits.

Observing and defining animal spirits was problematic; but, their ethereal qualities allowed for mental effort, neuromuscular activation, sensory functions, and nervous disease. For some, they expounded neurology, proto-psychology, physiology, sensibility, spirituality, sexuality, philosophy, and generation. If, as has been recently suggested, the modern self emerged in the eighteenth century,⁹⁵ then that modern self was acutely aware of the interior network of nerves connecting the mind and the body. Animal spirits were not a clean break from earlier physiological notions; the individual’s susceptibility to changes in heats, risings of passions, and emissions of vapours became increasingly expressed as sensitivity to fickle animal spirits and nerves. Throughout the eighteenth century, amorous scenes in literature would still invoke terms like flames, heats, and passions. If we are to understand the accounts of sexuality, feelings, motivations, and maladies that were dominant in the mid-eighteenth century, and especially in the literature of sensibility, then we need to understand the register of animal spirits.

“The Most Subtil, Volatile, and Spirituous Matter in Nature:”⁹⁶ Seed

Seed was composed of parent-derived and rudimentary material that provided for embryo formation. Until the late seventeenth century, descriptions of seed often evoked horticultural ideas and meanings. However, following the discovery of animalcules in semen, seed became increasingly equated to active and living microscopic entities. From the 1670s until the 1750s, the most enthusiastic researches and debates in generation focused on

⁹³ See Cheyne, *The English Malady*, 72-92; David Hartley, *Observations on Man, His Frame, His Duty, and His Expectations...*, vol. 1 (London: S. Richardson, 1749). Caverhill stated, “From these experiments it clearly appears that sensation is not carried on by vibrations.” Caverhill, *Cause of Heat*, 55.

⁹⁴ Flemming, *Nature of the Nervous Fluid*, 1.

⁹⁵ Dror Wahrman, *The Making of the Modern Self: Identity and Culture in Eighteenth-Century England* (New Haven: Yale University Press, 2004).

⁹⁶ *Philosophical Essay on Fecundation*, 8.

the nature of seed. These investigations highlighted the roles of both the brain and the testicles—of men and women—in the production of seed. Therefore, seed embodied the relationship between mind and genitalia. The creation and perfection of seed involved mechanical actions by reproductive organs, cerebral juices, and even thoughts and feelings. Like animal spirits, seed had an immediate connection with the “soul,” which in late seventeenth- and early eighteenth-century medical texts generally referred to the origin of an individual’s thought. The author of *A Philosophical Essay on Fecundation* reasoned “that the Soul must be suppos’d to exist in the Sperm or Seed, in a more eminent Degree and Measure, than in any other abstracted or secreted Part—except only the animal Spirits, which are the Medium betwixt Soul and Body.”⁹⁷ Qualities of the soul were infused into the seed; therefore, whatever affected the soul, such as a shocking experience or a profound idea, necessarily affected the stock of seed. “The advent of mechanical philosophy and physiology,” Sutton expounds, “not only retained these beliefs, but provided newly explicit mechanisms to explain why those partial to the expense of spirits in sexual activity would inevitably lose their intellectual vigour.”⁹⁸ This link between the creation and loss of seed, the economy of animal spirits, and the cerebral vigour led medics to draw similarities between the nature of the brain and genitals. Both the genitalia and the brain were nervous organs that required animal spirits and participated in creating seed. However, this seed connection between the groin and the mind involved anxieties about the bodily, mental, and moral impact of sexual behaviour. Significantly, eighteenth-century generation theories supposed seed to drastically affect the conditions of both the mind and the sex organs.

For anatomists, finding an adequate nerve passage for the animal spirits and seed to move between the brain and the genitals was essential for confirming this physiological connection, yet it proved perplexing. Willis initially assumed that male seed, which was concocted in the brain, travelled down nerves and seminal vessels to be deposited in the genitalia. In the 1660s, he described a pair of spinal nerves communicating to the male testicles.⁹⁹ As an epicentre of sense and the locus for seed perfection, testicles presumably had an extremely nervous anatomy. Willis was, therefore, confounded to find only two small testicular nerves.¹⁰⁰ His consternation is evident in the description of these two small

⁹⁷ *Ibid.*, 41.

⁹⁸ Sutton, *Philosophy and Memory*, 44. Sutton also observed that “the belief that the brain was the origin not only of animal spirits, but also of semen” (43).

⁹⁹ Willis, “Of the Description and Use of the Nerves,” in *Dr. Willis’s Practice* (1684), 140.

¹⁰⁰ It should be remembered that afferent and efferent nerve distinctions were not recognized yet (see Locke, *Thomas Willis’s*, 55). Also, there were several differing reports about testicular innervations, although most maintained a single nerve description. There are actually four testicular nerves: posterior scrotal, internal spermatic plexus on spermatic artery, external spermatic, and anterior scrotal. Drake describes a second set of testicular

testicular nerves in the 1684 edition of *Dr. Willis's Practice of Physick*. A lengthy section describes the origins and insertions of spinal nerves as demonstrated by the well-known engraving of the nervous system (fig. 1.1). Commenting on these nerves, which are labeled M, he wrote:

Concerning the Nerves which belong to the Testicles, here is not much to be spoken; for we have often sought in vain for a *great company of nervous passages* in them: I have very diligently searched sometimes in Man, also in a Fox, Dog, Calf, and likewise in a Boar and Monkey, but could never find belonging to them but one nerve carried from the Vertebral pair, which also for the most part is bestowed on the Cremasteral Muscle, so that, although an excellent humor is prepared within those parts, yet it doth not easily appear, that its matter is derived thither through the nerves.¹⁰¹

His expectation of finding a “great company of nervous passages” was not wrong: a generation after Willis anatomists established that there was in fact a second pair of testicular nerves. Yet, his claim to being the discoverer of the first pair of testicular nerves *was* wrong. Shortly after Willis’s death, Boerhaave noted that Bartolomeo Eustachi, the Italian anatomist and contemporary of Andreas Vesalius, first described and diagrammed the “Nerves sent from the Brain to the Testicles.”¹⁰² Eustachius’ contribution gained more recognition in the early eighteenth century, largely due to the posthumous publication of his *Tabulae Anatomicae* in 1714 by Giovanni Maria Lancisi and then again in 1744 by the renowned Leiden-based anatomist Bernhard Siegfried Albinus, who had studied under Boerhaave.¹⁰³ This short history of the discovery of testicular nerves highlights the focused probing into genital innervation at that time. As Willis’s comments reveal, these investigations were pursued to satisfy expectations of a direct, nervous link between the brain and the testicles—and not only in male bodies. “The Womens Testicles,” according to Willis, were furnished with “a provision of Spirits... much larger than is done in the other Sex.”¹⁰⁴ But, this comparison came in light of the minute innervation of male testicles. Willis consequently proposed an alternative theory that suggested arterial blood delivered animal spirits to testicles rather than nerves.

nerves, but suggests they are “very often not found.” James Drake, *Anthropologia Nova; or, a New System of Anatomy...*, 2nd ed. (London: W. Innys, 1717), 2: 117.

¹⁰¹ Willis, “Of the Description and Use of the Nerves,” in *Dr. Willis's Practice* (1684), 141.

¹⁰² Boerhaave, *Dr. Boerhaave's*, 58.

¹⁰³ See M. Fahrer, “Bartholomeo Eustachio—The Third Man: Eustachius Published by Albinus,” *ANZ Journal of Surgery* 73, no. 7 (2003): 523-8; Benjamin A. Rifkin, “The Art of Anatomy,” in *Human Anatomy: Depicting the Body from the Renaissance to Today*, eds. Benjamin A. Rifkin, Michael J. Ackerman and Judith Folkenberg (London: Thames & Hudson, 2006), 26.

¹⁰⁴ Willis, “Of the Description and Use of the Nerves,” in *Dr. Willis's Practice* (1684), 138.

Unconvinced of Willis's account, most anatomists continued to consider both male and female testicles as immensely important hubs of nervous activity, especially in relation to seed creation. His contemporary, Francis Glisson, reasoned that the "nerves in the testicle serve not for *motion*, neither is there any great use of the *sense* they have: wherefore it is credible they serve to bring to them some liquor of which the *sperm* is made."¹⁰⁵ While Glisson did not allow for much sensation in the testicles, he, like other natural philosophers, emphasized the testicles as a centre for refining nervous "liquor." This nervous liquor was added in a "coction"¹⁰⁶ with pure blood.¹⁰⁷ Concocted sperm was further perfected then compounded with "a thick balsamick Humour, almost without Motion, serving as a Vehicle to the Animalcules."¹⁰⁸ While some ingredients came directly from the brain, others were sourced from throughout the body—the entire constitution was involved and affected by preparing semen. Charleton's *Natural History of the Passions* (1674) explains how excess animal spirits are sent "together with a certain refined and generous Humor derived from the whole body... into the *Genitals*"¹⁰⁹ (fig. 1.2). The writings of Glisson and Charleton suggest that the most valuable substance in the eighteenth-century animal economy was seed—the most refined product of the body.¹¹⁰

¹⁰⁵ Francis Glisson, *Lectures and Other Papers*, ed. Andrew Cunningham (London: Wellcome Unit for the History of Medicine, 1998), 139. Similarly, James Cooke suggested, "When come to the Stones, they pierce the proper Coat, and spreading through their substance, are obliterated. Their use is to carry Blood and Spirits to the Stones, to prepare the same in Vessels near them for Seed, by a vertue fetched from the *Testicles*; ... the Organs of Seed." James Cooke, *Mellificium Chirurgiae: or, the Marrow of Chirurgery*, ed. Thomas Gibson (London: 1717), 311. "The semen virili is a semi-transparent, greyish white, and somewhat coagulated liquid; which is by means of the spermatic vessels, and the testicles, separated from the blood, and from the testis carried to the vesiculæ seminales, where it is kept for use." Falck, *Venereal Disease*, 51.

¹⁰⁶ See Cooke, *Mellificium Chirurgiae*, 311; William Harvey, *Lectures on the Whole of Anatomy: an Annotated Translation of Praelectiones Anatomiae Universalis*, trans., Charles O'Malley, Frederick Poynter, and Kenneth Russell (Berkeley: University of California Press, 1961), 45.

¹⁰⁷ Economically, Willis's paradigm still held that ejaculating drained the brain of animal spirits through the testicles' use of vital spirits. As well, he still retained a special seed-generating function for testicular nerves, suggesting that the "only Parenchyma into which the nerves convey the *succus nutritius* is the parenchyma of the testes. Semen is generated not only from the blood, which is poured down into the testes through the seminal blood vessels, but also from the *succus nutritius*." Locke, *Thomas Willis's*, 61.

¹⁰⁸ Boerhaave, *Dr. Boerhaave's*, 70. Another commentator wrote, "That the Male Sperm (of human, and other Creatures the same, doubtless) is of an oily, tenacious Nature, and will not easily nor readily mix and blend with other Fluids where there is not a strict Homogeneity or Similarity in their respective constituent Parts," and further described "the great Subtilty, Volatility, and Spirituosity of their Natures." *Philosophical Essay on Fecundation*, 6, 8.

¹⁰⁹ Charleton, *Natural History*, 23. See Salmon for a summary of the different views. Many thought arterial blood was mixed with animal spirits from the nerves to create the seed. Salmon, *Ars Anatomica*, 357-8.

¹¹⁰ "The matter of it seems not to be blood, but some milder juice, supplied by the nerves. For the nerves are far more copiously and intimately woven into the substance of the

In Aristotelian tradition, there were two kinds of seed—male and female; yet, some eighteenth-century medical authors proposed more. James Drake proposed a “Doctrine of three sorts of Seed,” which included a testicular seed, a seminal vesicular seed, and a prostatic seed.¹¹¹ As a serious and empirically-minded anatomist, Drake carefully detailed genital structure, examined comparative anatomy, and prepared demonstrations with minimal conjectures on physiology. When describing the testes, Drake reflected that “Some have fancy’d Glands to be necessarily interspers’d for the Separation of the Seed: But no Man has been able yet to demonstrate them.”¹¹² Drake’s anatomical observations on testicular tissue, like Willis’s conclusions on testicular nerves, prompted his objections to certain common misconceptions about seed physiology; although, few people heeded these objections. Rather, consensus continued to hold that animal spirits produced in the brain moved down through the spinal nerves and into the testicles, where these spirits were further prepared into a very fine seed, ready for ejaculation. John Marten even suggested that a head wound can hinder seminal matter from travelling “between the Brain and *Testicles*.”¹¹³ This supply and demand, seed and spirit system between the brain and the genitals was deeply ingrained in eighteenth-century thinking.¹¹⁴

In his alternate theory, Willis also made the surprising claim that “the Arteries instil a spirituous liquor into the Testicles after the same manner as in the Brain.”¹¹⁵ Seed was, according to Willis, produced in the cortex-like structure of the testicles, which he described as similar to a second brain.¹¹⁶ Others, such as Boerhaave, were struck that “So much Similitude is there in the Fabric of the Brain and Testicles.”¹¹⁷ Comparisons of their

testicles than the arteries or veins [are]; and therefore we shall find the substance of them white and not red, also the proper coat of it seems to be nothing else but a kind of dilatation of the nerves sent to it, from which coat everywhere are sent nerves tending towards the middle of the testicle.” Glisson, *Lectures*, 135-6. This perception of seed was essential for concerns about excess ejaculation in mid-century anti-masturbation advice. “The *Semen virile*, is a fluid of the most elaborate and noble production in the whole body, except that of the nerves, if such there be.” *A Short Treatise on Onanism; or, the Detestable Vice of Self-Pollution...* (London: printed and sold by Fletcher and Co., 1767), 15.

¹¹¹ Drake, 126.

¹¹² *Ibid.*, 118.

¹¹³ Marten, *Gonosologium*, 41.

¹¹⁴ Stephen Freeman, *A New Essay on the Venereal Diseases...*, 2nd ed. (London: F. Newbery and Mr. Pearce, [1775?]), 20. Freeman repeats much of Pechey’s brain-nerve-ejaculation discussion.

¹¹⁵ Willis, “Of the Description and Use of the Nerves,” in *Dr. Willis’s Practice* (1684), 141.

¹¹⁶ *Ibid.*

¹¹⁷ Boerhaave, *Dr. Boerhaave’s*, 56. “So small therefore are the Arteries which furnish the Testicle like the Brain; so that there is not any red Blood to be found within the Testicle, as some Anatomists have mistakenly affirmed” (*ibid.*, 50). “I am indeed sensible, that the Smalness of this Artery will be objected, since it is very inconsiderable in proportion to the Testicle; but the same Difficulty may be raised with respect to the Brain, since the Arteries sent to the Encephalon are equally small, in proportion to the large Bulk of the cortical and

substance, nervous quality, their use of animal spirits, and their interactions with the soul, the testicles and the brain had many commonalities in the animal economy. Anticipating later preformationist debates, Charleton expounded how excess animal spirits were “further prepared” in the “Laboratory, and Magazin for propagation of the *Species*” to be seed “formed into the *Idea* of an Animal exactly like to the first Generant.”¹¹⁸ That *ideas* could be housed in the genitalia as well as in the brain created another parallel that suggested the organs of generation had cerebral qualities. Regardless of debates about seed being created in the brain or in the testicles, and whether in males or females, seed was a cerebral product.

However, such analogies were not only in respect to testicles; the medically learned also saw wombs as brain-like.¹¹⁹ The midwife Jane Sharp explained the close relationship of the womb and the brain: “The Pain of the Head by affection with the *Womb*, is in all the Head commonly, but is chiefly in the hinder part of the Head, because the *Womb*, being Nervous consents with the Membranes of the *Brain*, by the Membrane of the Marrow of the *Back*, and hence it is that Women are more subject to the Head-ach than Men are, because of the *Womb* that holds such affinity with the Nerves of the Head.”¹²⁰ Aside from the womb the ovaries too were exceptionally nervous. As Boerhaave explained, the “Vessels with Nerves, are so intricately wove together, as to compose the Fabric of the Ovarium in such a manner, that it can *scarcely* be described.”¹²¹ La Mettrie offered a mechanical perspective of the body, described the role of animal spirits and nerves, and analogized the womb and the brain.¹²²

There were several reasons why these late seventeenth- and early eighteenth-century anatomists perceived so much likeness between these organs of generation and the brain. The three foremost reasons for this anatomical likeness were as follows: animal spirits were physiologically crucial to both mental and reproductive functions; natural philosophy and medicine considered genitalia as having their own wills; cultural representations, as widely evidenced in literature, involved several tropes associating the brain with genitalia. Relating to the third reason, Raymond Stephanson’s *The Yard of Wit* illustrates how male genitalia were significant metaphors for representing eighteenth-century literary creativity.¹²³ Literary

medullary Substance; and therefore there is but a small Quantity of red Blood sent by those Arteries through the Medulla of the Brain.” Salmon, *Ars Anatomica*, 363.

¹¹⁸ Charleton, *Natural History*, 23.

¹¹⁹ See Muri’s comparison of how Willis described the womb’s “mechanical process of distillation” and that same process “occurring in the brain.” Muri, *Enlightenment Cyborg*, 203.

¹²⁰ Jane Sharp, *The Compleat Midwife’s Companion: or, the Art of Midwifery Improv’d* (London, 1725), 200.

¹²¹ Boerhaave, *Dr. Boerhaave’s*, 124.

¹²² La Mettrie, *Man a Machine*, 13, 31.

¹²³ Raymond Stephanson, *The Yard of Wit: Male Creativity and Sexuality, 1650-1750* (Philadelphia: University of Pennsylvania Press, 2004).

tropes paralleled anatomical comparisons between the genital and the cerebral. Willis, in his explanation of the “Offices of the Brain and its Parts,” described how “within the Womb of the Brain all the Conceptions, Ideas, Forces, and Powers whatsoever both of the Rational and Sensitive Soul are framed; and having there gotten a species and form, are produced into act.”¹²⁴ Ideas, like human seed, were subject to generation.¹²⁵ In form and function, the eighteenth-century anatomists saw uncanny similarities between the organs of generation and the brain.

Cerebral efforts and conditions were imprinted on the body in many ways. The affected mannerisms of sensibility were an especially fashionable way in which mental conditions became expressed through the body. Seed generation was another version of this physical expression of cerebral activity. A common idea was that seed reflected the state of the parent’s mind. Imaginings, frights, or shocks could lead to misconceptions such as monstrous babies. Infertility was often a consequence of an unsound mind. Shaken concentration during coitus could drastically affect male seed. The consequence, as manifest in Tristram Shandy, was that the fetus had “his own animal spirits ruffled beyond description,—and that in this sad disorder’d state of nerves, he had laid down a prey to sudden starts, or a series of melancholy dreams and fancies for nine long, long months together.”¹²⁶ Female ova too were affected by nerves. The mid-century anatomist and man-midwife, William Smellie, described ovulation as caused by nervous fibres that “contract themselves so as to bring the *Fimbria* of the Fallopian tube in close contact with the ripe *Ovum*.”¹²⁷ This nervous movement was caused by the “general titillation and turgency; in consequence of which, nervous fibrils are convulsed, and a fluid ejected.”¹²⁸ Ejaculation of any kind involved a nervous convulsion. In males, the turgency of the seed excited the seminal passage, causing the pleasurable spasms that expelled the semen. “The turgescency of the Seed,” expounded Willis, cause nerves “to be irritated with too unseasonable an action, according to the impressions made by the Senses or the Brian; into the consent of which presently the Yard is excited.”¹²⁹ It was not possible for procreative generation to be unfeeling.

¹²⁴ Willis, “Of the Anatomy of the Brain,” in *Dr. Willis’s Practice* (1684), 64.

¹²⁵ “Wherefore it will be worth our labour to inquire into these places, or the generation of these more noble faculties, and the first rise and primitive beginnings of them, as also more curiously to consider the divers parts of the Brain, or the Organs serving to their Generation.” *Ibid.*

¹²⁶ Sterne, *Life and Opinions*, 3.

¹²⁷ William Smellie, *A Treatise on the Theory and Practice of Midwifery*, 5th ed. (Dublin: T. and J. Whitehouse, 1764), 68.

¹²⁸ *Ibid.*, 69.

¹²⁹ Willis, “Of the Description and Use of the Nerves,” in *Dr. Willis’s Practice* (1684), 140.

Ejaculation taxed bodies and minds more than any other normal physiological action.¹³⁰ Semen emissions launched individuals into violent convulsions, insensible stupors, and utter ecstasy. Boerhaave recounted that “*Ruysch* has demonstrated, that in the *Orgasmus Venereus*, the Moment before the Semen is ejected, the Glans and whole cavernous Body of the Urethra are extremely turgid, so as to be ready to burst, but soon after a Convulsion follows, and the Semen is discharged with a considerable Loss of Strength throughout the whole Body; but in some People the *Corpus cavernosum* is not distended, whence Impotency, which not being easily understood, cannot be cured by any Physician.”¹³¹ Although far more commonly discussed in reference to males, sperm production and its physiological sequelae were not exclusively male experiences. Some physiologists thought women also produced sperm and had “the same Symptoms as happen to Men, (and as some say, much greater and more ecstatick) as besides the former Extremity of Pleasure, and height of Satisfaction, afterwards Sadness, Lassitude, Conturbation in the Countenance, Laziness, and Cessation from Desire.”¹³² These symptoms were an expansion and elaboration of the well-known adage *omne animal post coitum triste est*—ejaculating seed lowered one’s spirits.¹³³

Expulsion of seed majorly disrupted the delicate economy of animal spirits. As such a precious substance, seed was made and lost at a premium cost. “Of all secretions in the animal œconomy,” Falck mused about seed, “there are none so elaborate as this; and we may justly add, none more delicate.”¹³⁴ According to some authors, both males *and* females produced and ejaculated this precious seed. Theories that maintained only one sex made seed allowed that the other sex had some reproductive process akin to seed creation and ejaculation. More often it was argued that only males produced seed and females had a parallel loss of animal spirits through menstruation. If it was proposed that only females produced seed, then males’ seedless seminal fluid still contained an influential amount of animal spirits that jarred their animal economy upon ejaculation.¹³⁵ Regardless of which sex

¹³⁰ The composition of sperm and the physiological taxation once ejaculated. From “immoderate Copulation, there will be an overmuch Dissipation of the Spirits, to the debilitating of the Semenifick Powers.” Salmon, *Ars Anatomica*, 358.

¹³¹ Boerhaave, *Dr. Boerhaave’s*, 82.

¹³² Salmon, *Ars Anatomica*, 365. Mauriceau also thought that females ejaculate seed in a similar manner to men. François Mauriceau, *The Diseases of Women with Child...*, trans. Hugh Chamberlen (London: Andrew Bell, 1710 [orig. 1668]), 10.

¹³³ For a discussion of this Aristotelian phrase in *Tristram Shandy*, see Juliet McMaster, “‘Uncrystalized Flesh and Blood’: The Body in *Tristram Shandy*,” *Eighteenth-Century Fiction* 2, no. 3 (1990): 209.

¹³⁴ Falck, *Venereal Disease*, 54.

¹³⁵ Versions of menstruation were also possible in male bodies, although that idea had lessening credibility through the eighteenth century. See Lisa Wynne Smith, “The Body Embarrassed? Rethinking the Leaky Male Body in Eighteenth-Century England and France,” *Gender & History* 23, no. 1 (2010): 26-46; Gianna Pomata, “Menstruating Men:

contributed seed, the consequences of sex and reproduction for both males and females was a detrimental loss of animal spirits, which crippled their animal economies and debilitated their minds.¹³⁶ “Seedy juice”¹³⁷ was the purest, most potent, and generatively powerful substance in the animal economy and produced by the brain.¹³⁸ Therefore, spending seed meant robbing—even bankrupting—the coffers of the nerves, mind, and soul.¹³⁹ The economy of seed crucially defined venereal pathologies, reproductive capacities, sexual morality, and mental wellbeing.

A decreased mental capacity was the most immediate result of ejaculation. As Richard Lower’s notes from Willis’s lectures at Oxford in the early 1660s describe, semen discharge caused severe physiological and neurological deficits.¹⁴⁰ “The brain is the first to be weakened by, and suffer from, a discharge of semen as all the nerves are, as it were, cheated out of their moisture and nourishment, therefore all the parts that borrow their operations from them are thoroughly unsteadied: the eyes are dulled, hearing is impaired, and all the lower parts of the body go limp and are less quick to move as the nerves have lost their tension.”¹⁴¹ Willis outlined a hydraulic chain-reaction, wherein the exceedingly sensitive mind was cheated of its fluids and spirits.¹⁴² Following Willis’s concerns over the

Similarity and Difference of the Sexes in Early Modern Medicine,” in *Generation and Degeneration: Tropes of Reproduction in Literature and History from Antiquity to Early Modern Europe*, ed. Valerie Finucci and Kevin Brownlee (Durham: Duke University Press, 2001), 109-152. For the differences in how male and female bodies were medically understood to respond to illness in early modern Britain, see Wendy D. Churchill, “The Medical Practice of the Sexed Body: Women, Men, and Disease in Britain, circa 1600-1740,” *Social History of Medicine* 18, no. 1 (2005): 3-22.

¹³⁶ The qualifying statement sometimes added to *post coitum omne animal triste est, sive gallus et mulier* [after sex all animals are sad except the cock and the woman] was not often used in eighteenth-century medical writings. Dropping this exception about women may reflect the general understanding that both male and female orgasms were normal. I don’t know if perceptions about cocks and sex changed.

¹³⁷ John Pechey, *The Compleat Midwife’s Practice Enlarged in the most Weighty and High Concernments of the Birth of Man Containing a Perfect Directory or Rules for Midwives and Nurses*, 5th ed. (London: H. Rhodes et al., 1698), 7.

¹³⁸ “But, next to these [the Soul and animal spirits] the Sperm is the most noble, volatile, and sublime Part or Quintessence of the Whole... It is abundantly more replete with animal Spirits, than any other Part or Substance in the human Fabric.” *Philosophical Essay on Fecundation*, 41.

¹³⁹ “A long-standing (though far from unanimous) analogy or even identity between semen and foamy ethereal quintessence was easily extended to the whole spirit realm, so that the same spirits operate in the brain and in the seed.” Sutton, *Philosophy and Memory*, 43.

¹⁴⁰ Likewise, Freeman described how “the seed must needs consist of a nervous juice and plenty of spirits from the brain, because of the great debility and enervation that is induced upon the brain and nerves by the too great expence of it.” Freeman, *New Essay*, 20.

¹⁴¹ Locke, *Thomas Willis’s*, 62.

¹⁴² “The animal spirits failing in the fountain, the whole nervous system becomes depauperated and flaggy.” Freeman, *New Essay*, 10. Samuel Tissot described: “It is true, that we are ignorant, whether the animal spirits and the genital liquor, are the same thing; but observation teaches us, as will be hereafter seen, that these two fluids have a very strict

small dimensions of testicular nerves, William Salmon rationalized that “Animal Spirits running thro’ those extream small Nerves, descends *Gradatim*, or by little, and little to the Testicles, and the Spirituous blood in like manner. So that after many present Copulations, and much Emission of Seed, there will be a kind of Deficiency of it.”¹⁴³ Quantifying this fluid equation, the surgeon James Cooke contended that “one ounce of Seed cast out, debilitates more, especially in those weak, than the effusion of twelve ounces of Blood.”¹⁴⁴ Glisson thought “the wasting of our dram of sperm more weakens and dejects the spirits than twenty times as much blood taken away does.”¹⁴⁵ According to Albrecht von Haller, this effect of sex “surprisingly weakens, and prejudices the whole nervous system.”¹⁴⁶ Such cerebral weakening by ejaculation instantaneously deadened intellect, incited melancholy,¹⁴⁷ and, at times, irreversibly impaired health.¹⁴⁸ Reckless wasting of seed also undermined the constitution of those yet to be born. Falck suggested that “the best semen, and from which we may expect a good healthy offspring, (if planted in a good soil) is that which is at least twenty-four hours in collecting in a sound man; who has not abused his constitution in repeated debaucheries of whatever kind, and which must be ejaculated with fervency, love, and pleasure.”¹⁴⁹ Moderation and care in ejaculation were essential to the health of individuals, children, and society.

The delicate relationship between ejaculation and the animal spirit economy underpins Laqueur’s account of eighteenth-century “moral physiology.”¹⁵⁰ The sensitivity of genital nerves, the susceptibility of sensible bodies to fluid loss, and the mental consequences of ejaculation all fit moral frameworks that promoted specific kinds of sexual behaviour. Medical tracts on generation often included moral messages connecting ejaculation with negative consequences, particularly mental debility. Michael Stolberg asserts, “Fears of semen loss in ejaculation were indeed an important and persistent feature”

analogy, and the loss of the one, or the other, produces the same ills.” Samuel Auguste David Tissot, *Onanism: or, a Treatis upon the Disorders Produced by Masturbation*, trans. A. Hume (London, 1766), 8-9.

¹⁴³ Salmon, *Ars Anatomica*, 361.

¹⁴⁴ Cooke, *Mellificium Chirurgiæ*, 355-6.

¹⁴⁵ Glisson, *Lectures*, 139.

¹⁴⁶ Albrecht von Haller quoted in Tissot, *Onanism*, 58.

¹⁴⁷ “Hence after the use of venery sadness follows, and upon the overfrequent use of venery the very *brain* is observed to be very much weakened and to wax thin and watery.” Glisson, *Lectures*, 139.

¹⁴⁸ In his mid-seventeenth-century lectures, William Harvey affirmed Aristotelian notion that semen expenditure consumed profound amounts of body nutrition—men were “reduced thin by too much unseasonable coitus” and become “crestfallen pin-Buttockt.” Harvey, *Lectures on the Whole*, 48.

¹⁴⁹ Falck, *Venereal Disease*, 58.

¹⁵⁰ Thomas Laqueur, *Solitary Sex: A Cultural History of Masturbation* (New York: Zone Books, 2003), 206.

in the eighteenth century.¹⁵¹ Indeed, these medical/moral concerns about sexuality corresponded to the onanism movement that emerged in the mid-century. Much earlier than Laqueur's account begins, Isbrand van Diemerbroeck's description of "the generative Parts of Women" warned how "those Parts, that involve Women in a thousand Miseries, enervate Men a thousand manners of ways, by means of which weak and feeble Women triumph over the strongest of Men. Parts which have ruined many the most potent Kings, destroy'd Emperors, made wise Men Fools, deceived the Learned, seduced the Prudent, thrown the Sound into most shameful Distempers, impoverished the Rich, and vanquished the stoutest Hero's [*sic*]."¹⁵² Diemerbroeck's hyperbolic and misogynistic denunciation of female reproductive organs hinges on the enervating effect of sex.

Later writers, such as the author of *Onania; Or, the Heinous Sin of Self-Pollution* (1716), who is almost certainly John Marten,¹⁵³ also emphasized how sex negatively affected the nerves. *Onania* included confessional letters from three "young Men, who each injur'd themselves by this Pollution,"¹⁵⁴ and sought the author's medical advice. The first young self-polluter complained that his "Spirits are languid to a great degree, my Loins are weak, and as my Business is studying, at Saasons [*sic*] my Brain seems weak and as it were numb'd, so that I can't have a clear Thought."¹⁵⁵ This moralizing medical advice significantly reinforced the social implications of the physiology of sex, nerves, and animal spirits in the mid-eighteenth century. Marten connected involuntary ejaculation with certain behaviours: those who have "too high or liberal Eating and Drinking...total abstaining...too frequent corresponding or setting their Thoughts on *Veneral* Objects...as well as such who are of Scorbutick, Hypochondriack and Melancholick Constitutions, ...or that have us'd in their Youth too much or excess of *Venery* and manual Violence or *Friction*."¹⁵⁶ Here Marten also related inappropriate mental activities or preoccupations, "setting Thoughts on" things that impress upon the mind, things such as novels or erotic images.¹⁵⁷ At the centre of these worries about mental and physical influences and behaviours were the animal spirits, which sustained every such experience and tended to involve the organs of generation.

¹⁵¹ Michael Stolberg, "An Unmaly Vice: Self-Pollution, Anxiety, and the Body in the Eighteenth Century," *Social History of Medicine* 13, no. 1 (2000): 4.

¹⁵² Isbrand van Diemerbroeck, *The Anatomy of Human Bodies...*, trans. William Salmon (London: Edward Brewster, 1689), 154.

¹⁵³ Laqueur convincingly argues that this treatise was authored by John Marten. See also Michael Stolberg, "Self-Pollution, Moral Reform, and the Venereal Trade: Notes on the Sources and Historical Context of *Onania* (1716)," *Journal of the History of Sexuality* 9, no. 1/2 (2000): 37-61.

¹⁵⁴ *Onania; Or, the Heinous Sin of Self-Pollution, and All Its Frightful Consequences, in both Sexes, Considered, with Spiritual and Physical Advice*, 4th ed. (London, 1718), 44.

¹⁵⁵ *Ibid.*, 47.

¹⁵⁶ Marten, *Gonosologium*, 34.

¹⁵⁷ See Harvey, *Reading Sex*, 45-9; Laqueur, *Solitary Sex*, 39-49.

Moral-physiologies also informed depictions of sexual scenarios in non-medical works.¹⁵⁸ “One notable example is William Hogarth’s often reproduced *Before and After* series. Initially commissioned in 1730 by the MP John Thomson and another soon after by the Duke of Montagu, this series starts with a male suitor assertively presenting his sexual desire to a hesitant young female. The second scene, *After*, shows the post-coital outcome. According to historian Jenny Uglow, Hogarth intentionally conveyed “a specific sexual sense” along with “a moral bite” in this series.¹⁵⁹ However, there are certain moral ambiguities that Hogarth raises, such as the innocence of the female, which Peter Wagner considers as questionable, because the beauty marks she wears in the engraved version signify sexual promiscuity.¹⁶⁰

The series painted for Montagu (figs. 1.3 and 1.4)¹⁶¹ has several hints as to the physiological underpinnings of this sexual progression. In *Before*, the suitor’s codpiece is central, emblazoned in red, plush breeches (not unlike those Uncle Toby wore for his advance upon Widow Wadman). His sexual voraciousness is evidenced by the bulge in his trousers and mirrored by the excitement of the lapdog.¹⁶² Like the toppling boudoir furniture and toilette items,¹⁶³ both the male and female have upset interiors, with spirits, juices, reason, and sense disordered by the flurry of passions. The denouement shown in *After* has the red powder box dashed upon the floor and a mirror shattered, both of which possibly suggest the rupture of the maiden’s chastity. Like their clothing, both his and her animal spirits and mental states are thoroughly dishevelled. He, in particular, confusedly struggles with his trousers. His affect is blank as he gazes mindlessly into the corner of the picture, mouth ajar, and seemingly dumbstruck. He suffers from total inanition.

Between the several versions of this series there are major differences. For instance, Thomson’s commissions are outdoor scenes whereas all other versions are situated in the

¹⁵⁸ Faramerz Diabhoiwala observes, “Even libertines themselves shared these associations between lust and degeneracy. For all its bravado about male sexual conquest, libertine writing about sex is notably obsessed with the insatiability of women and the emasculating effects of sexual excess.” Faramerz Dabhoiwala, *The Origins of Sex: A History of the First Sexual Revolution* (London: Allen Lane, 2012), 150.

¹⁵⁹ Jenny Uglow, *Hogarth: A Life and a World* (London: Faber & Faber, 2002), 178.

¹⁶⁰ Peter Wagner, *Reading Iconotexts: From Swift to the French Revolution* (London: Reaktion Books, 1995), 111.

¹⁶¹ In the *Biographical Anecdotes of William Hogarth*, John Nichols wrote that a “certain vicious nobleman, whose name deserves no commemoration,” the Duke of Montagu, supposedly commissioned this painting and its companion, *After*. John Nichols, *Biographical Anecdotes of William Hogarth...* (London: printed by and for J. Nichols, 1781), 94.

¹⁶² “Dogs were the traditional symbol of fidelity, but dogs were also used to suggest sexual excitement.” N. F. Lowe, “The Meaning of Venereal Disease in Hogarth’s Graphic Art,” in *The Secret Malady: Venereal Disease in Eighteenth-Century Britain and France*, ed. Linda E. Merians (Lexington: University Press of Kentucky, 1996), 176.

¹⁶³ See *Ibid.*, 169.

woman's bedchamber (figs. 1.5 and 1.6). Montagu's paintings had a young couple in a rather subdued and simple bedchamber whereas subsequent prints, such as those made in 1736, included more hinting objects and featured a slightly older male suitor donning a wig (figs. 1.7 and 1.8). Yet, all versions of *After* show the same vacant expression in the gentleman's face. Ronald Paulson notes that in Thomson's version the "boy's face has become very red—a brick red as if from heat exhaustion—and his trousers are open, revealing the pubic hair and a penis inflamed to match his face."¹⁶⁴ This kind of genital and facial parallel was the same as that concerning blushes and erections. Blushing in erotic literature paired tender reactions or emotions with sexual physical responses. Although in the different versions the adventurer's stance changes, he is consistently shown wobbly-kneed, shaken, and comparatively irresolute. This outcome of a sexual foray was a version of what Nicholas Rowe described in *The Fair Penitent*.

To die with joy, and straight to live again,
Speechless to gaze, and with tumultuous transport—¹⁶⁵

A voyeuristic account in *Fanny Hill* came even closer to Hogarth's depiction: "she was deliciously embalmed by an injection, of which we could easily see the signs in the quiet, dying, languid posture of her late so furious driver, who was stopped of a sudden breathing short, panting, and, for that time, giving up the spirit of pleasure."¹⁶⁶ Fiona Haslam suggested that Hogarth made "use of aspects of disease for moral purposes;"¹⁶⁷ and it indeed appears that Hogarth showed the moral turpitude of sex through the physiological ideas of that era. The gentleman's mind has been robbed of its faculties following his ejaculation, leaving him in a sleeping, post-coital daze just like his animal counterpart in the scene—the lapdog. Commenting on the engraved version, Uglow recognizes that the "book on the floor marked 'Aristotle', is 'Omne Animal Post Coitum Triste Est', and this post-coital sadness seems genuine, a true regret as well as a physical deflation."¹⁶⁸ Hogarth's moral comments on sexuality are implied through physiognomic details, coupling gesture and expression with spirits and semen.¹⁶⁹ The Aristotelian detail emphasizes the physical cause of the gentleman's depression; yet, any physiological consequences of sex—especially the loss of seed and animal spirits—were inextricable from moral meanings.

¹⁶⁴ Ronald Paulson, *Hogarth's Graphic Works*, 3rd ed. (London: Print Room, 1989), 219.

Salmon pink might be more accurate than brick red, in regards to the boy's face.

¹⁶⁵ Nicholas Rowe, *The Fair Penitent* (London: Edward Arnold, 1969 [orig. 1703]), IV, 37.

¹⁶⁶ Cleland, *Fanny Hill*, 152.

¹⁶⁷ Fiona Haslam, *From Hogarth to Rowlandson: Medicine in Art in Eighteenth-Century Britain* (Liverpool: Liverpool University Press, 1996), 2. Haslam further describes this series as "within the framework of his 'Modern Moral Subjects' and in his forays into the realms of 'High Art.'"

¹⁶⁸ Uglow, *Hogarth*, 180.

¹⁶⁹ See Haslam, *Hogarth to Rowlandson*, 2.

But Hogarth's *Before* and *After* were not the only erotic productions to express physiological details about sex in terms of animal spirits and sensibility. Rather, many literary works also depicted sexual events using those physiological ideas. *The Works of the Earls of Rochester, Roscommon, Dorset, &c.* that Edmund Curll published early in the century was bound with a collection of bawdy works called *The Cabinet of Love*, which included "The Delights of Venus." References to "semen" and "seed" are littered throughout this poem, although these physiological terms were censored in the same manner as other lewd words like "cock" and "cunt," which were likewise replaced with "——."¹⁷⁰ The poem employs a standard erotic narrative, in which an experienced woman, Tullia, gives a virgin maid detailed sexual advice. Tullia recalls her wedding night when her betrothed, Callus, stripped her naked. She "blush'd, but yet my Thoughts were pleas'd to find / Myself so laid."¹⁷¹ Soon after, Tullia discovers "his——so large," and blushes again. Callus takes his cue from this florid response and furthers their sexual engagement by prompting her "Hand unto his——did seize."¹⁷² After a few ejaculations, Callus "But languished poor——could do no more; / Tho' not for want of Will, but want of Pow'r."¹⁷³ He recovers his sexual capacities "with Confections and a willing Mind," which made "Once more——was to—— inclin'd."¹⁷⁴ These struggles between the mental desire to copulate and bodily limitations again reflect an understanding of sex grounded in an economy of animal spirits.

Armstrong's mid-century poetic guide to sex, *The Oeconomy of Love*, also relied on the idea of a fluid economy sent in to tumult by sexual arousal and left languid and flat by ejaculation.

Credit these Signs. The Boy may wrestle, when
 Night-working Fancy steals him to her Arms
 Of Nymph oft wish'd awake; and 'mid the Rage
 Of the soft Tumult, every turgid Cell
 Spontaneous disembogues its lucid Store,
 Bland and of azure Tinct. Nor envy Thou

¹⁷⁰ "The Delights of Venus," in "The Cabinet of Love," appended to *The Works of the Earls of Rochester, Roscommon, Dorset &c.*, 4th ed. (London: E. Curll, 1714).

¹⁷¹ *Ibid.*, 147.

¹⁷² *Ibid.*

¹⁷³ *Ibid.*, 152. "The young fellow had just dismounted, when the old lady immediately sprang up, with all the vigour of youth, derived no doubt from her late refreshment, and making him sit down, began in her turn to kiss him, to pat and pinch his cheeks, and play with his hair, all which he received with an air of indifference and coolness that showed him to me much altered from what he was when he first went on to the breach." Cleland, *Fanny Hill*, 63.

¹⁷⁴ "Delights of Venus," 152. For a similar trope, see "Song XXIX: Parody on Chloe's Kisses, to that tune," in *The Cure for the Spleen...* (Newcastle, 1769): "My p—k's life in it shall be spent, / You shall die with transcending blisses— / The devil's in't if now you're not content." (38).

Waking Fruition, while such happy Dreams
 Visit thy Slumbers; liveliest then the Touch
 Thrills to the Brain, with all Sensations else
 Unshaken, unsexed.—The Maid demands
 The Dues of *Venus*, when the parting Breasts
 Wanton exuberant and tempt the Touch,
 Plump'd with rich Moisture from the finish'd Growth
 Redundant now: For late the shooting Tubes
 Drank all the Blood the toiling Heart could pour,¹⁷⁵

Cleland also depicted “the dejection of spirit and flesh, which naturally followed” coital ejaculation.¹⁷⁶ He described these symptoms as a “trance,”¹⁷⁷ “motionless languor,”¹⁷⁸ “the die-away moment,”¹⁷⁹ “to expire in an agony of bliss,”¹⁸⁰ a “mighty intoxication,”¹⁸¹ and, generally, the “symptoms of overpowering pleasure.”¹⁸² The impact on the animal spirits and constitution was such that it caused “panting, fainting, and dying” upon discharge.¹⁸³

Ejaculation was not the only possible destiny for seed: semen was also circulated back through the body, eliciting beneficial physiological and psychological effects. Boerhaave had the most to say about semen’s re-entry into circulation. He contended “that the Semen must return and circulate, though very slowly”¹⁸⁴ and that it “must be absorbed again by invisible Veins, in Proportion as it is secerned.”¹⁸⁵ Essentially, the body tried to maintain constant levels of semen. When semen was reabsorbed, it was “sent throughout the whole Habit, wherein it produces those wonderful Changes which we experience”¹⁸⁶ and sustained a “healthy State.”¹⁸⁷ Those “wonderful Changes” were secondary sex characteristics that arose in puberty: new hair growth, a lowered voice, and increased body mass. However, Boerhaave also noted that this circulating semen altered “the Passions of the

¹⁷⁵ John Armstrong, *The Oeconomy of Love*, 5th ed. (Dublin, 1742), 5.

¹⁷⁶ Cleland, *Fanny Hill*, 202.

¹⁷⁷ *Ibid.*, 161.

¹⁷⁸ *Ibid.*, 69.

¹⁷⁹ *Ibid.*

¹⁸⁰ *Ibid.*

¹⁸¹ *Ibid.*, 157.

¹⁸² *Ibid.*

¹⁸³ *Ibid.*

¹⁸⁴ Boerhaave, *Dr. Boerhaave’s*, 60.

¹⁸⁵ *Ibid.*, 52.

¹⁸⁶ *Ibid.*, 59-60. “The Testicle likewise seems to labour for the whole Body, to maintain the masculine Habit;” “That though the Testicle is designed for the Propagation of the Species, yet a great Part of the seminal Fluid prepared in the Testicle, is returned into the Mass of Blood for preserving the Individuum.” *Ibid.*, 67, 68.

¹⁸⁷ *Ibid.*, 68.

Mind”¹⁸⁸ and made “the Inclinations of the Mind... more powerful.”¹⁸⁹ This idea was taken to herculean extremes by another author: “If any man is not profuse in lavishing his seed, he becomes strong, courageous, and bold, nor is he afraid to encounter ever wild animals; the prudent and temperate among the wrestlers give testimony to this assertion.”¹⁹⁰ Seed could also be absorbed and circulated in a body other than that which produced it. Following coitus, male seed could be taken up by uterine arteries and incite changes in the female’s habit. Moods, passions, and the strength of the mind, both in the short and long term, were profoundly affected by the economy of seed. Through describing the circulation, expense, and effects of both seed and animal spirits, medical writers explained sexual difference, behaviours, and experiences.

Ab Ovo or Homunculi: Gender Politics in Conception and Gestation Theories

Notions of sexual difference influenced not only ideas about how seed affected both male and female bodies, but also discussions about which sex actually produced seed. This controversy as to whether one sex or both sexes created seed harked back to the split between Aristotle’s one-seed theory and Galen’s two-seed. But, distinguishing the role of each sex became imminently important following the discovery of mammalian eggs, or ova, in the mid-seventeenth century and then again following the discovery of animalcules, particularly sperm, nearer the close of that century. Discussions about conception were formative to gender politics, and not only for learned medical men. New theories that arose, including preformationism, epigenesis, ovism, and spermism, responded to situations, anxieties, and ideals specific to early eighteenth-century British culture. Some natural philosophers, physicians, and anatomists saw themselves at the heart of defining human generation and the sexes. These medical enquiries and pursuits significantly influenced eighteenth-century gender definitions and widened the socio-cultural authority of medical discourse. A defining feature of these medical debates about gender, sex, seed, and reproductive roles was the open and varied opinions that were raised. While spermism and ovism may suggest extremely polemical views on sex and generation, the varied range of possibilities and regular movement of opinions between these positions actually reveal how flexible categories of sex were at this time. That flexibility was also more generally characteristic of the culture and physiology of sensibility.

Conception was at the crux of gender issues within generation discussions. As defined by John Aitken, “*Conception, or impregnation, is the immediate formation or*

¹⁸⁸ Ibid., 60

¹⁸⁹ Ibid.

¹⁹⁰ Aretæus, of Cappadocia, *Aretæus, Consisting of Eight Books...*, trans. John Moffat (London: J. Walter and W. Richardson, [1785?]), 226.

vivification of the foetus.”¹⁹¹ Whereas gestation was indisputably the province of mothers, the parental contributions to conception were equivocal. Patrilineal traditions encouraged Aristotelian conception theories, wherein the father’s seed was the germ and the mother’s womb a nourishing bed. According to the horticultural metaphors that dominated pre-modern seed theories, the womb was fertile soil in which the seed, whether male or combined female and male, were planted. This metaphor fell by the wayside as anatomists increasingly abandoned figurative language in favour of technical and precise descriptions. Yet, horticultural tropes evidently blended with new theories and experiments, such as those on eggs, which gave rise to discussions of human generation in terms of incubation.¹⁹² Those discoveries of female ova and male sperm further perpetuated deviation from the Aristotelian system and horticultural metaphors. Nonetheless, midwifery texts and medical advice manuals continued to employ this more readily understood trope. For example, Jane Sharp’s *The Midwives Book* (1671) blended that horticultural trope with the two-seed theory: “True Conception is then, *when the Seed of both Sexes is good, and duly prepared and cast into the Womb, as into fruitful Ground.*”¹⁹³ Like most seventeenth- and eighteenth-century authors, Sharp designated the womb as essential to conception. But, once eggs and sperm were visually observed, older seed theories became complicated, problematized, and either reconfigured or just discarded.¹⁹⁴

In the 1775 translation of his *Elements of Anatomy and the Animal Oeconomy*, Claude Person lamented how the philosopher of generation “soon finds himself bewildered, and his imagination often supplies that which he so eagerly wishes to discover, but which is destined perhaps never to be revealed to him.”¹⁹⁵ Microscopic observations and speculations catalyzed new debate about seed. How conception occurred had three possibilities. The first followed Galen’s theory and suggested that the seminal matter of both parents mixed in near equal parts.¹⁹⁶ The second possibility was reasoned by the sixteenth- and seventeenth-

¹⁹¹ John Aitken, *Principles of Midwifery...*, 2nd ed. (Edinburgh, 1785), 41.

¹⁹² “The Semen is formed rather by Incubation than according to the Laws of Circulation.” Boerhaave, *Dr. Boerhaave’s*, 50. According to Smellie, Marcello Malpighi was seen as the greatest contributor to incubation theories for generation. Smellie, *A Treatise*, 68.

¹⁹³ Jane Sharp, *The Midwives Book, or, The Whole Art of Midwifery Discovered...* (London: Simon Miller, 1671), 92. cf. John Maubray’s description: “*Natural Conception* then, is the first principal *Action*, and peculiar *Function* of the WOMB, in duly commixing and fomenting the retain’d SEEDS of *Man* and *Woman*.” John Maubray, *The Female Physician, Containing all the Diseases Incident to that Sex, in Virgins, Wives, and Widows* (London, 1724), 83. Maubray goes on to discuss horticultural metaphors, such as Sharp used.

¹⁹⁴ Older notions associated with the one-seed and two-seed theories, such as conception happening seven hours after insemination, were also called to question.

¹⁹⁵ Claude Person, *Elements of Anatomy and the Animal Oeconomy*, trans. Samuel Foart Simmons (London: J. Wilkie, 1775), 255-6.

¹⁹⁶ Salmon maintained this view in *Ars Anatomica* (357) as did Diemerbroeck and Mauriceau in *Diseases of Women*, 10.

century discovers of mammalian eggs and retained by ovists, who contended that fetal rudiments were held in the ovaries and stimulated, fecundated, or fermented by male semen. The third model, promoted by late seventeenth-century observations of animalcules, supposed that females had eggs that nourished and males had sperm that contained fetal rudiments, such as pre-existent homunculi, which theory was called spermism.¹⁹⁷ Whether in spermist or ovist doctrines, contention also surrounded the nature of germ material included in the seed. Specifically, did the germ material have a perfect human form, as preformationists purported, or did fetal form progressively emerge from disorganized germ material following conception? As Person described, the imagination supplied the details of the natural philosopher's and anatomist's observations on both eggs and sperm. In many cases, that imaginative input followed from predominant cultural concerns and anxieties of that period.

In particular, patrilineal anxieties blatantly influenced preformationist spermism.¹⁹⁸ Major contributors to preformationist discourse included Antoni van Leeuwenhoek, Jean Astruc, and Nicolas Hartsoeker.¹⁹⁹ The existence of animalcules was of such moment that Boerhaave allowed that "These Animacules have been admitted by all the Moderns, who have been able to see with their Eyes by the Assistance of Microscopes."²⁰⁰ Falck later

¹⁹⁷ Spermists include Leeuwenhoek, Swammerdam, and de Graaf, with Aristotle and his followers often considered to be of this opinion as well. For summaries of these contending systems, see Aitken, *Principles*, 42-3; Person, *Elements*, 256-8; Pierre Dionis, *A General Treatise on Midwifery...* (London: A. Bell et al., 1719), 67. "Some, I know, say that the Rudiments of all human Kind were contained in the *Ovaria* of *Eve*; and those who maintain the contrary Sentiment, hold, that they were all contained in the *Semen* of *Adam*." John Astruc, *A Treatise of the Venereal Disease, in Six Books*, trans. William Barrowby (London, 1737), 1: 332.

¹⁹⁸ For a biographical history of preformationists and spermists, see Pinto-Correia *The Ovary of Eve*; Joseph Needham, *A History of Embryology* (Cambridge: Cambridge University Press, 1934); Shirley Roe, *Matter, Life, and Generation: 18th-Century Embryology and the Haller-Wolff Debate* (Cambridge: Cambridge University Press, 1981); Matthew Cobb, *Generation: The Seventeenth-Century Scientists Who Unravelled the Secrets of Sex, Life, and Growth* (London: Bloomsbury Publishing, 2006); and Elizabeth Gasking, *Investigations into Generation, 1651-1828* (Baltimore: Johns Hopkins University Press, 1967).

¹⁹⁹ Pinto-Correia has discussed these figures in *The Ovary of Eve*. Jan Swammerdam could also be considered a preformationist. However, Peter Bowler has argued that Swammerdam was not; yet, based on Swammerdam's observations and arguments in *The Book of Nature I* would contend otherwise. Jan Swammerdam, *The Book of Nature*, trans. Thomas Flloyd. ed. John Hill (London, 1758). For Bowler's point of view and a concise history of the theory, see his "Preformation and Pre-existence in the Seventeenth Century: A Brief Analysis," *Journal of the History of Biology* 4 (1971): 221-44. An interesting note is that John Hill edited the English translation of Swammerdam's work, evidencing Hill's intimate proximity with theoretical writings on generation.

²⁰⁰ Boerhaave's continued comments suggest the influence that the debate regarding animalcules had in affirming their existence: "Even the Controversy which subsisted betwixt *Hartsoeker* and *Lewenhoeck* concerning the Origin of the Discovery, is no small Confirmation of the Truth of the Experiment." *Dr. Boerhaave's*, 69.

observed that “no one dreamt about this liquid being animals, till the ingenious Mr. Leevenhock gained the reputation of discovering little tadpoles in the seed, by the help of a microscope; which notion was so far improved by him and his followers, that they gradually discovered these animacula, to be actual man in miniature; nay more amazing, they pretended to distinguish the different sexes too.”²⁰¹ Charles Nicholas Jenty, a Paris-trained surgeon and London-based anatomy lecturer made famous for his anatomical texts illustrated by Jan van Rymdyk,²⁰² was initially apprehensive about animalcule theories. But, like many of his contemporaries, Jenty dismissed these apprehensions after using a microscope to view myriads of swimming animalcules. Visually beholding such fanciful miniature animals struck many such empiricists with bewildering implications, especially relating to generation.

With Leeuwenhoek’s and Hartsoeker’s experiments as precursors, empiricists began keenly peering through microscopes at semen, intent on discovering the nature of male seed. In a 1757 publication about human anatomy and physiology, Jenty offered a particularly convincing account of animalcules in semen:

Here follows the Fact.

He received human Semen in cold fair Water, at its immediate Exit from the Urethra, wherein he saw distinctly, even without the Assistance of Glasses, a white Fœtus, consisting of an opaque and fluid Matter, the Head of which was larger than the rest of the Body by one Third Part.²⁰³

This do-it-yourself experiment by an unnamed physician is recorded in Jenty’s chapter “On the Generation of the Human Species.” The account continues on to relate that the same physician found fetuses in the semen of several quadrupeds, especially in a specimen from an ass, wherein he could “easily discern a very large Head, Trunk, four Legs, and a Tail, floating in a diaphanous greenish Liquid.”²⁰⁴ These acute observations of the curious physician acted as incontestable proofs “that the Male alone, in all Animals, produces the Fœtus ready formed; and that the Matrix of the Female serves only as a Receptacle.”²⁰⁵ That seeing animalcules in semen and then concluding that only males retained the valuable role of seed carriers can be interpreted in two ways. As Oscar Kenshur distinguishes,

²⁰¹ Falck, *Venereal Disease*, 51.

²⁰² Jenty’s life is otherwise obscure.

²⁰³ Jenty, *A Course*, 320.

²⁰⁴ *Ibid.*, 321.

²⁰⁵ *Ibid.* Boerhaave came to a similar conclusion: “The seminal *Liquor* found in the medullary Part of the Testicle in the Epididymis, Vas deferens, and seminal Vesicles, being diluted soon after Death with *warm Water*, and viewed by the best Microscopes, appears to contain innumerable small living Animacules, of an oblong Figure with a Tail, like Eels, swimming up and down in the Liquor.” He continued: “It will appear probable that these Animalcules of the Male Semen contain the future Rudiments of the whole Body.” *Dr. Boerhaave’s*, 68.

“ideological essentialism” would dictate that inherent qualities of that animalcule observation would necessarily lead to such male-privileging conclusions whereas “ideological contextualism” would suggest that the animalcule observation and the subsequent interpretations were partly products of circumstance.²⁰⁶ In Jenty’s case, the exclusion of other investigators’ observations of animalcules in female fluids and the imaginative sightings of the miniature ass both indicate the influence of ideological contextualism. In other words, Jenty’s patrilineal conclusions most likely followed from cultural and personal influences.

Several critics dismissed preformationists as little more than Laputian projectors. As one such critic, John Needham upbraided ovist and spermist preformationists for applying old theories onto new microscopic discoveries. For him, it was ludicrous to maintain the seed/egg paradigm when animalcules could be found on every surface and in every substance. Needham criticized spermist preformationists for inadequately demonstrating “that the original Embryo was really contained in each of these Animalcules.”²⁰⁷ Based on his universal observance of animalcules, Needham expounded his new system as follows:

I suppose all *Semen* of any kind to be an exalted Portion of animal or vegetable Matter, secreted from the Aliment of every generating Subject, when it is adult, and no further Demand is made for its Increase and Growth; this I suppose to be endued with a proportionable vegetative Force; to be various in various Circumstances, and heterogeneous in different Subjects; but to be uniform in its Productions, when it falls into a proper *Matrix*, where it finds Matter to assimilate, of a Quality and in a Quantity sufficient to form that specific Being.²⁰⁸

Notably, Needham’s theory suggests semen was not exclusive to male bodies, allowing any kind of “generating Subject” to emit seed. Whereas the female’s womb remains a necessary matrix, a male contribution was reduced to that of a mechanical animalcule strainer. This paradigm was completely contrary to spermist models wherein male contribution was foremost. Regarding his observations, Needham noted a debt to his friend Mr. Hill, who supplied Needham with “the *Semen* of a Dog in his own House” along with some comments about seed-infused preparations.²⁰⁹

²⁰⁶ Oscar Kenshur, *Dilemmas of Enlightenment: Studies in the Rhetoric and Logic of Ideology* (Berkeley: University of California Press, 1993), chapter 1, “Ideological Essentialism.”

²⁰⁷ John Needham, *Observations upon the Generation, Composition, and Decomposition of Animal and Vegetable Substances* (London, 1749), 7.

²⁰⁸ *Ibid.*, 49.

²⁰⁹ *Ibid.*, 18.

As a blend of empirical observation, seed theory, gender anxieties, and sensational imaginative projection, animalculist theories were irresistible fodder for satirists.²¹⁰ Some writers, like John Hill, appealed against the authoritative position on gender politics suddenly occupied by anatomists. Hill's relation to the Royal Society, preformationism, and even to his friend Needham was often that of a critic.²¹¹ Published in 1750, Hill's *Lucina Sine Concubitu* satirically attacked preformationism, animalcule theories, and mid-eighteenth-century natural philosophy. Written under the nom de plume of Abraham Johnson and selling for a shilling, *Lucina* is a mock letter to the Royal Society containing "a mere physical Account of human Seed, and the Anatomy of a Female Womb."²¹² An aging natural philosopher, Abraham Johnson discovers generation is simply free floating, preformed animalcules in westerly winds being deposited in female wombs. Johnson makes an experiment using his chambermaid and some isolated animalcules; his findings affirm his theory. Such a discovery has vast repercussions according to Johnson: bastards may not mean female infidelity, sexual intercourse and matrimony are redundant, and females can be inseminated in his own clinic and en masse. Acutely aware and vehemently critical of generation debates, Hill's satire comically foregrounds dubious theories about male seed and particularly spoofs Needham's males-as-strainer notion. *Lucina* also lampoons how Willis likened spirit distillation to the creation of animal spirits and in relation to generation. Hill's character Johnson ponders, "whether your *double-distill'd* Children, who pass thro' the seminal Vessels of both Sexes in the old way of Generation, are not of course more healthy and vigorous, than your single-distill'd Infants."²¹³ Tracts like *Lucina* checked the reductionist tendencies of seed theories, and criticized gender claims in those theories. So did erotic literature. As Callus teasingly informed his wife "When, *Tullia*, this prolific Seed you spill'd, / An Infant, e'er begot or born, you kill'd."²¹⁴ Such mid-eighteenth-century literary mocking muted the open speculation and candid postulations about seed and conception that natural philosophers, physicians, and anatomists were voicing.

Like Hill's tract, *A Philosophical Essay on Fecundation* portrayed gender bias in conception theories as ridiculous. The author rightly observed that "there are not wanting some Physicians, and other Philosophers, (of the minute class, we presume) who pretend,

²¹⁰ Notable satires on preformationism include Vincent Miller [pseud.], *The Man-Plant* (London, 1751); Sterne's *Tristram Shandy*; John Hill's *Lucina sine Concubitu* (London, 1750); and Voltaire's *Micromégas* (1752), which was translated in part by Tobias Smollett.

²¹¹ For a further account of Hill see George Rousseau, introduction to *The Letters and Papers of Sir John Hill, 1714-1775* (New York: AMS Press, 1982). See George Rousseau, "Sexual Knowledge: Panspermist Jokes, Reproductive Technology, and Virgin Births," in *A Cultural History of the Human Body: In the Enlightenment*, ed. Carole Reeves (London: Berg Publishers, 2012), 53-71.

²¹² Hill, *Lucina*, 3.

²¹³ *Ibid.*, 45-6.

²¹⁴ "Delights of Venus," 150.

that the Female *Ova* have nothing essential in them; and that they are of no other Use or Moment, in the Business of Generation, than to serve as a proper *Nidus*, Harbour, or Bed, for the Male Sperm to fructify in.”²¹⁵ This argument was against assigning a passive position for females since eighteenth-century understandings of the animal economy designated both male *and* female organs of generation as extremely sensitive, nervous, and active parts.²¹⁶ Therefore, the author reasoned, the womb and egg were also infused with active animal spirits. The same author forthrightly argued that “the Seed of both Male and Female... are of equal necessity, Use, and Importance, to the Business of Generation”²¹⁷ and were indeed “much of the same Nature.”²¹⁸ Other authors gave biased or gender-privileging arguments about generation, as did La Mettrie: “But here some will object, and say, that we must suppose both sexes to have an equal share in generation, otherways, say they, how could we account for that surprising likeness there is in children, sometimes to the father, and at other times to the mother?”²¹⁹ Unsurprisingly, he also described sex difference in terms of nerves and sensibility. While recognizing the influence of education in creating gender inequality, La Mettrie asserted that “In the fair sex, the soul adapts itself to the delicacy of constitution: thence flow that tenderness, that affection, those lively sentiments founded rather upon passion than reason; and in fine, those prejudices and superstitions whose impression is so hard to be effaced. Man, on the contrary, whose brain and nerves participate of the firmness

²¹⁵ *Philosophical Essay on Fecundation*, 11. See Henry Bracken’s description: “Whether the Animalcule was lodged in the Seed of the Male or the Female *Ova*, is a matter of controversy; and the Arguments on both Sides leave this without Question, That the Female Ovum is a proper *Nidus* for the Animalcule in the Male Seed; and there are such prodigious Numbers of little Creatures, like so many Tadpoles, swimming every way in the Male Sperm of all Animals, as is really a very amazing Sight.” Henry Bracken, *The Midwife’s Companion* (London, 1737), 12; “But others said that the Groundwork or underwarpe of the Parts is Seed, and the Woof or Superstructure blood, supposing that there are two material Principles of the body: Seed and blood. Which Opinion I have refuted.” Bartholin, introduction to *Bartholinus Anatomy*; “The probable Conjecture, as to the Formation of the Fœtus, is; that it is produced, under a fluid Form, in the seminal Vesicles of the Male, by the Concourse of the Blood secreted by the Testicles, and that of the animal Spirits, which, during the Act of Coition, rush into the said Vesicles, by a Mechanism like that which has concurred to the Increase of the Parts of the ingendering Male... The Fœtus, being conveyed into the Matrix, is immediately nourished there by the Semen of the Female.” Jenty, *A Course*, 316-7.

²¹⁶ For a description, as anatomists often offered, of how the clitoris “answers to a Man’s Yard in Shape, Situation, Substance, Erection, and differs from it only in Length and Bigness,” see Garth, *Dispensary*, 163.

²¹⁷ *Philosophical Essay on Fecundation*, 44.

²¹⁸ *Ibid.*, 7. The author continues to describe how “the *Ova*, which Women contribute to the Work of Generation, have and Essence altogether as noble, subtil, volatile, and important, as the Sperm of Man” (11) and also supplies long arguments for the participation of females in generation (46).

²¹⁹ La Mettrie, *Man a Machine*, 80.

of all the solids, has his mind, as well as the features of his face, more nervous.”²²⁰ Highly gendered accounts of generation were coupled with similar physiologies of nerves.

Late seventeenth- and early eighteenth-century theories about generation variously privilege one sex as the sole contributor to the offspring’s likeness, even though established observations from animal husbandry so plainly showed otherwise.²²¹ Theorizing about how a female egg and male sperm interacted in conception remained mystifying. In an enthusiastic moment, Needham fancifully described how “imaginary Valves were appointed in each Egg admitting one, exclusive of every other spermatic Animal. Happy the first of these minute Beings that could take Possession of this little Cell, and shut the Door against contending Millions!”²²² Like many natural philosophers, Needham was astounded at the droves of minute animalcules involved in conception. His imaginings of the event reflected the older theories of an active, if not, violent male seed assaulting the passive female seed.²²³ Even the ardent defender of equal contributions by both sexes supposed that “the Female Eggs, or *Ova*, are actually torn to Pieces, separated, and dissolv’d, in the Male Sperm.”²²⁴ That anonymous author’s view of the moment of conception was a whimsical combination of romantics, mechanics, and personification: “Was the Body of Woman transparent... We should see Ten thousand *Animalculæ* (suppose them so many *Cupids*) of the different Sexes, tho’ of the same Species, making the most ardent and violent Love together; till at length, tir’d with the Conflict, perhaps, or having mutually insinuated themselves into, and incorporated with each other, they unite and combine, and so constitutes but one Heart, one Soul, one Body.”²²⁵ While negotiating Harvey’s eggs,²²⁶ Leeuwenhoek’s animalcules, and the doctrine of animal spirits, mid-eighteenth-century discussions of seed threw the gender politics of that group of learned men into relief. Even the unnamed supporter of equality

²²⁰ *Ibid.*, 14.

²²¹ For the seventeenth- and eighteenth-century investigations into, theories about, and publications on animal breeding, see Nicholas Russell’s chapter “Generation and the Market: the Background to Animal Breeding in the Seventeenth and Eighteenth Centuries,” in *Like Engend’ring Like: Heredity and Animal Breeding in Early Modern England* (Cambridge: Cambridge University Press, 1986), 39-57. Russell noted that “preformationist and pre-existent theories would have been untenable if any serious reference had been made to the evidence from biparental heredity” (43).

²²² Needham, *Observations*, 4-5.

²²³ “The Male Sperm is... the active Voice: For it assaults the *Ovum* furiously at all Quarters—rushes violently into its Pores—and, in like manner as Water acts upon Sugar and Salt, it dissolves it by breaking the Cohesion of its Parts.” *Philosophical Essay on Fecundation*, 19.

²²⁴ *Ibid.*, 18.

²²⁵ *Ibid.*, 16-7.

²²⁶ “Outside of his ill-founded ovism, destined to have an illustrious future, Harvey’s views on generation had only a very modest success. He was considered merely one Aristotelian among many.” Roger, *Life Sciences*, 96.

between male and female seed tended towards descriptions of a docile egg and an active swarm of sperm, “which skip and play about.”²²⁷

Although theories about seed often privileged one sex or the other, most seventeenth- and eighteenth-century medical writers agreed that the nervous qualities of genitalia applied to both sexes. For males and females, being sensible to pleasure and experiencing nervous responses in the genitals was requisite for conception.²²⁸ Willis insisted that “whatever of sense or motion is made about the Venereal acts, is owed to the influence of the Spirits through these Nerves. In Men the delightful provision of the Genital humor, and in Women the no less pleasant reception of the same depends on the action of those nerves.”²²⁹ Shortly after, Boerhaave reiterated Willis’s description of spirits, convulsions, and conception but in more detail and by adding animalcules.

The Male Semen therefore replete with living Animalcules, excited or enlivened considerably by intense Heat, and perhaps a large flow of animal *Spirits*, being thrown with a considerable Force through the Mouth of the Womb, now more relaxed or open, and the Valves of its Neck, as well as those of the Uterus itself, being now more loose, turgid, and in a manner slightly *inflamed*, is likewise more plentifully supplied with it moistening *Lymph* and animal Spirits; while the nervous Papillæ in the wrinkled Furrows of the Vagina, being tickled by Attrition; the Uterus is by that means soon after thrown into a convulsive *Contraction*, in which being heated and agitated, the Ovum *conveyed* into it, receives an incredible small living Animalcule, through the then dilated *Pores* of the glandular Membrane of the Ovum; which is thereupon retained in the Womb, enlarged, and grows or adheres to some Part by its Placenta, while the rest and les vivid Animalcules are suffocated: and thus is Conception performed.²³⁰

Conception involved animal spirits, lust, sensations, excitement, and genital movements. It also depended on the will.

²²⁷ *Philosophical Essay on Fecundation*, 9.

²²⁸ “When a Man and a Woman (and the like in all other Species of Animals) are met together, and are determin’d in the amorous Congress, the exquisite Titillation which the Pathics (*viz.* Women, and other Females) ressent in the said Act of Coition, puts the whole Fabric of the Womb, and all its circumjacent Parts, into a violent Agitation, or momentary Convulsion.” *Philosophical Essay on Fecundation*, 14. The author continues to describe how “all the Nerves and Fibres of the said Part or Parts are violently irritated and contracted. In consequence of this violent Titillation, Irritation, and Contraction.”

²²⁹ Willis, “Of the Description and Use of the Nerves,” in *Dr. Willis’s Practice* (1684), 140.

²³⁰ Boerhaave, *Dr. Boerhaave’s*, 138.

Conception required love and desire. Therefore, “Women,” according to the widely published late seventeenth-century midwife Jane Sharp, “seldom or never conceive when they are ravished.”²³¹ Even in the mid-eighteenth century, Jenty explained that for conception to occur copulation needed to excite “a convulsive Constriction and Attrition of the very sensible and tender Parts which lie within the Contiguity of the external Opening of the Vagina, after the same Manner as we observed in Man.”²³² The general acceptance of these requisite mutual sensations, responses, and mental participations not only situated conception and generation within the confines of marriage, but also established conception as a moment of sexual volition and personal agency for both sexes. As will and pleasure were necessary for conception, those with illegitimate babies were often suspected of either wilful adultery or premarital sex. Whereas arousal, intercourse, and ejaculation could be involuntary, conception required the will. This view of conception as an act of the will depended upon nerves moving animal spirits, feelings, desires, and seed between the mind and groin.

Conclusion

Anatomical observations and cultural anxieties melded together, producing a physiological understanding of generation that emphasized the sex organs’ sensitivity to the external world and close connection to the mind. Medical investigators described intricate nervous routes that allowed for fluid economies to flow between the mind and genitalia. These connections explained processes of generation, such as seed creation, conception, and developing adult sex characteristics. They also explained sexual experiences, such as lapses into tremors or dazes and spells of melancholy or stupidity following orgasm and ejaculation. Physiological descriptions of how sex and reproduction affected the body and mind through the actions and qualities of animal spirits were adopted for depictions in sentimental novels, satirical tracts, and erotic literature, all of which disseminated those ideas further beyond medical circles. Bridging the physical and non-physical, spiritual and corporeal, mental and carnal, animal spirits were a vital yet mysterious element coursing through nerves and underlying human generation and the culture of sensibility. Concerning how animal spirits bridged the mental and physical, Flemying observed, “As to that ultimate difficulty, concerning the manner of the operation of our will upon the fluids and solids of our body, it is common to, and equal in all possible explications of animal sensation and motion.”²³³ That difficulty, he concluded, was “the positive laws of union, between our corporeal and incorporeal parts, that is, between mind and body, established by our all wise

²³¹ Sharp, *Midwives Book*, 68.

²³² Jenty, *A Course*, 325.

²³³ Flemying, *Nature of the Nervous Fluid*, 39-40.

and all powerful creator.”²³⁴ Animal spirits and nerves bound the body and mind, allowing late seventeenth- and eighteenth-century views of generation as a psychosomatic issue. Those same nerve properties were integral to how thinking, feeling, and behaviour were understood in the culture of sensibility.

Animal spirits were an especially significant site where wider political, social, religious, and philosophical influences, or what historian Shirley Roe called the “extrascientific components,”²³⁵ entered discussions about generation in the eighteenth century. As is explored further in the following chapters, how animal spirits were supposed to function in generation, whether in creating seed, in conception, in enabling sexual pleasure, or in inspiring amorous behaviour, all related to particular perceptions about gender, morality, medicine, and human nature. Unlike the kinds of distinct pivotal shifts in eighteenth-century medical and cultural understandings of sex that Laqueur argued, manifold ideas about sex difference were actually proposed and discussed in that era in terms of generation and sensibility. This is not to say that certain sex differences and gender relationships were not commonly known and accepted, but that the physiology of animal spirits, which directed discussions and investigations into sex and generation, suggested a similar relationship between groin and mind for males and females.

²³⁴ Ibid.

²³⁵ Roe, *Matter, Life, and Generation*, 148.

Figures: Chapter One

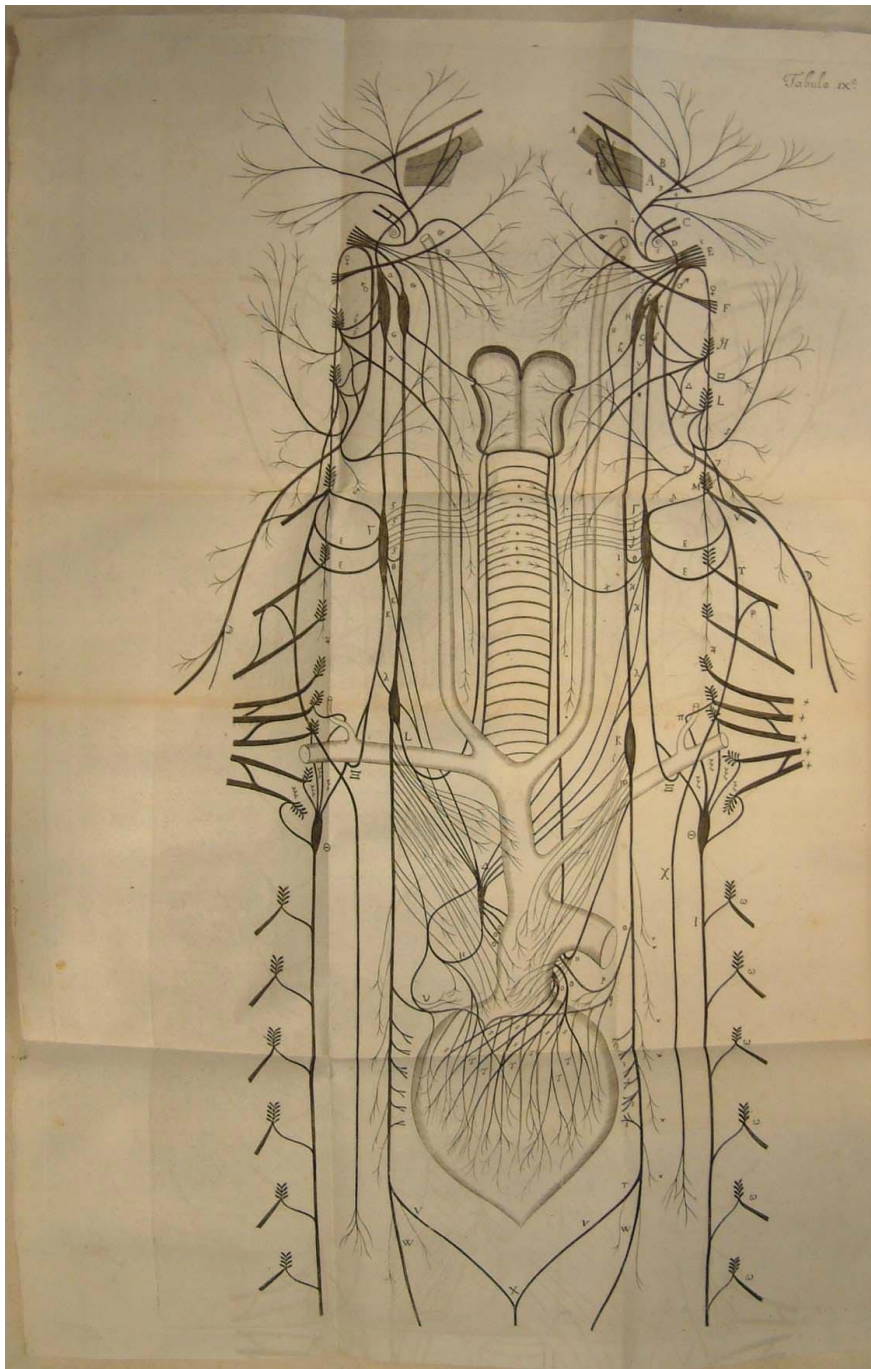


Fig. 1.1 Engraving made by Christopher Wren of the spinal nerves from Thomas Willis's *Cerebri Anatome: Cui Accessit Nervorum Descriptio et Usus* (1664). The testicular spinal nerves are labeled M.

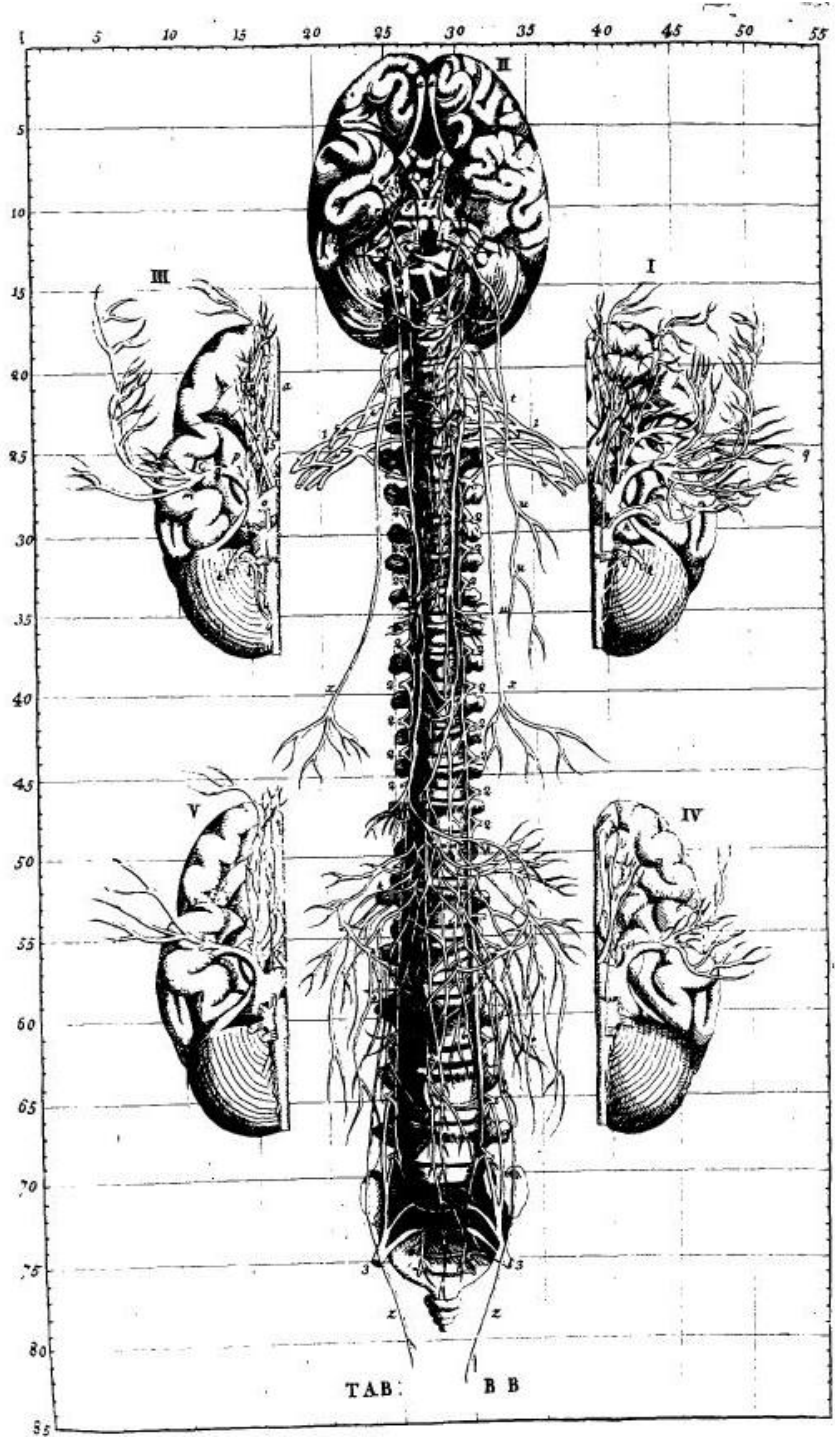


Fig. 1.2 Eustachius' nerve map that was included in Jacques-Bénigne Winslow's *The Anatomy of the Human Body*, trans. George Douglas (London, 1734). The catalogue of Laurence Sterne's library included this edition.

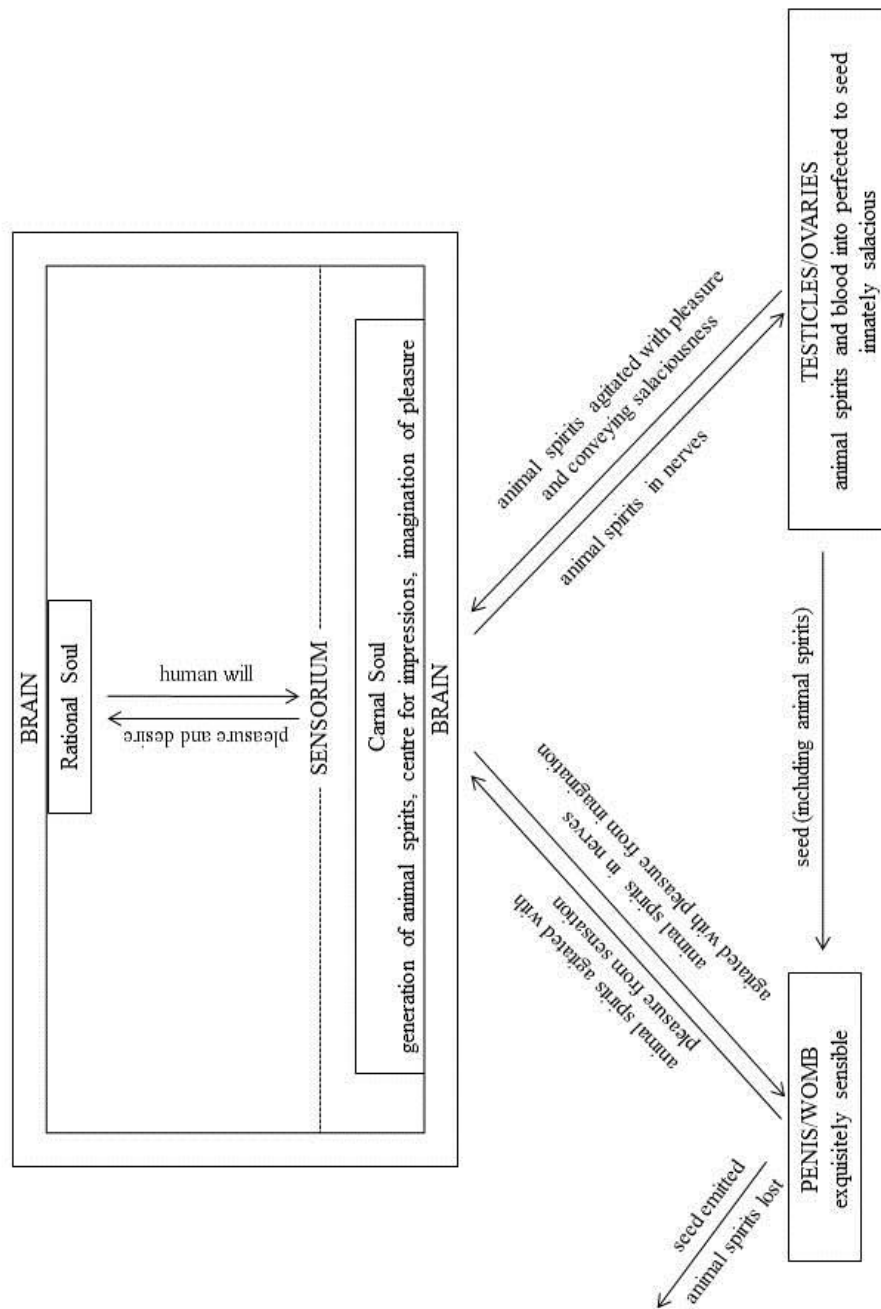


Fig. 1.3 A scheme of the late seventeenth- and eighteenth-century physiological theory involving nerves, animal spirits, genitalia, and the mind.



Fig. 1.4 William Hogarth's *Before* (1730-31) painted for John Thomson.



Fig. 1.5 William Hogarth's *After* (1730-31) painted for John Thomson.



Fig. 1.6 William Hogarth's *Before* (1730-31) painted for the Duke of Montagu. When compared to contemporaneous pieces depicting polite love, such as Jean-François de Troy's *Declaration of Love* (1731), the positions of the lovers are quite similar, but slight differences in gesture emphasize the violent and unbridled passions in Hogarth's.



Fig. 1.7 William Hogarth's *After* (1730-31) painted for the Duke of Montagu.

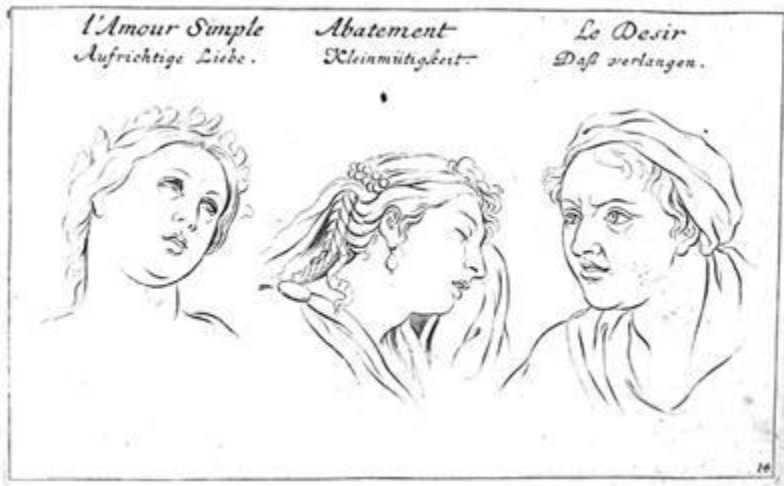


Fig. 1.8 Engraving by Johann Christoph Weigel published in 1721 showing how feeling and expression should be artistically represented, after studies by Charles Le Brun or Sebastien Le Clerc the Younger.

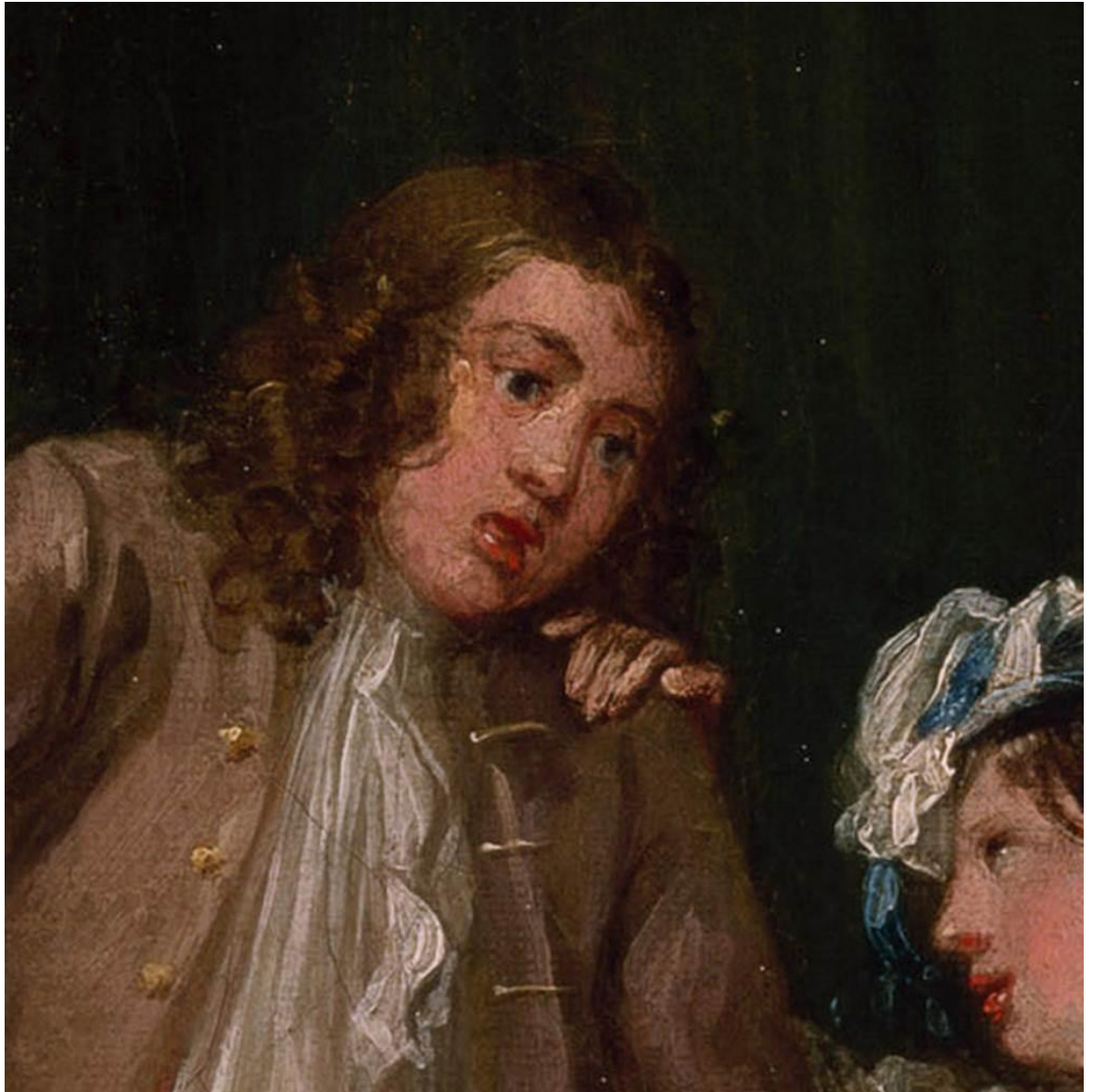


Fig. 1.9 Detail from William Hogarth's *After* (1730-31) painted for the Duke of Montagu. The suitor's stupefied expression betrays his post-ejaculatory state of body and mind.

Chapter Two: Hung, Drawn, and Quarto-ed; Anatomical Displays of Genitals

One of the lasting legacies of eighteenth-century Britain was an enthusiasm for collecting, describing, displaying, and cataloguing objects embodying knowledge and curiosity about the natural world. Such objects were laden with political, social, and cultural meanings, and especially so when they related to human bodies. Here I examine how anatomical demonstration of the organs of generation became a prominent practice that communicated ideas about sexuality and the sensible body. In particular, this chapter explores the meanings of two related kinds of demonstrations of male and female genitalia. The first is anatomical inflations/injections of penises; the second is automata as models of wombs. Both of these forms of demonstration suggest the expansive influence that eighteenth-century anatomists wielded over knowledge about the sexual body, and show Georgian society's particular interest in, and notions of, how sex organs worked. These anatomies consolidated certain ideas about the sexual, sensible body in a new empirical and public medium. Specifically, eighteenth-century demonstrations emphasized the mechanical properties of genitalia; yet, anatomists reserved a space for animal spirits and—by extension—vitalism. Therefore, anatomical demonstrations revealed the essential nervous qualities and cerebral connections of female and male genitalia, which was in keeping with understandings of them as exquisitely sensible. There was an exchange between anatomy and literature: ideas about sensibility were substantiated by anatomical demonstrations of genitalia's nervous qualities, while anatomical practices gained credence from the prominence of sensibility in literary culture.

As this chapter discovers, eighteenth-century medical cultures and the culture of sensibility collaboratively promoted ideas of genitals as mechanical parts animated by nervous fluids. Theories about how sex organs worked were not self-evident conclusions that logically followed anatomical observation and physiological experiment. Although anatomists affected to reveal physical realities and ostensible truths through new experiments and methods, social and cultural ideas often directed anatomical demonstrations and interpretations. As Catherine Wilson suggests, new technologies and procedures do not drive “discovery by themselves.”¹ Rather these “new technologies and procedures come to be valued and exploited only in the context of certain hopes and expectations.”² Genitals were supposed to be sensible. Therefore, the notion that animal spirits coursed through nerves, connecting the mind and genitals, became imprinted on anatomical experiments, preparations, and observations.

¹ Catherine Wilson, *The Invisible World: Early Modern Philosophy and the Invention of the Microscope* (Princeton: Princeton University Press, 1995), 71.

² *Ibid.*

Anatomical demonstrations existed in a sphere shared by the medically trained and the socially fashionable, which included the literati.³ One commentator, Benjamin Clarke, described the scene at a particular exhibition of curiosities and anatomy called Rackstrow's Museum: "so great is the attendance of students, naturalists, literati, and others at this repository of Natural and Artificial curiosities."⁴ Those individuals who participated in creating, viewing, or discussing curiosity cabinets filled with, among various other items, objects associated with generation also learned, enacted, and promoted sensibility. Like other anatomical displays at that time, Rackstrow's was "consistent with the tastes of a viewer of refined sensibility."⁵ With economic and social favour in mind, creators of anatomical collections responded and even pandered to the fashions, feelings, and opinions of their genteel clients. Anatomical innovations, especially in demonstration and rhetoric, became crucial avenues used by literati to access new notions about reproduction and sexuality. Demonstrations explaining physiology were particularly convincing and influential because, as the art and science historian Julie Hansen contends, "Representation, and demonstration—the witnessing of a phenomenon with replicable results—is essential to its acceptance into the larger cultural body of knowledge."⁶ Innovations in experimentation, both in methods and technology like microscopy, injections, inflations, and mountings, allowed demonstrations of new vessels and tissues connecting the genitalia to the rest of the body and especially the brain. Such activities inspired theories, like mechanical and hydraulic physiologies, that fuelled further discussions about materialism and vitalism in relation to sexuality, and particularly concerning volition in sexual feelings and behaviours.

Literary representations of these same physiological and anatomical ideas not only evidence how prolific or resonant these ideas about genitalia were, but instance how a change in medium—literary representations instead of anatomical models—offered the same concepts but with dramatically different meanings. For instance, demonstrations of the mechanics of penile erection were polite demonstrations of anatomical knowledge in John Hunter's museum, but descriptions of that action in John Cleland's writings were licentious portrayals. Crucially, both representations responded to ideas about sensibility. But anatomists developed acceptable contexts for their displays and discussions. As Sam Alberti

³ For a discussion of public versus private anatomy, see Simon Chaplin, "Dissection and Display in Eighteenth-Century London," in *Anatomical Dissection in Enlightenment Britain and Beyond: Autopsy, Pathology and Display*, ed. Piers Mitchell (Farnham: Ashgate, 2012), 95-114.

⁴ Matthew Craske, "'Unwholesome' and 'Pornographic': A Reassessment of the Place of Rackstow's Museum in the Story of Eighteenth-Century Anatomical Collection and Exhibition," *Journal of the History of Collections* 23 (November 2011), 77, quoting *Morning Herald* (2 March 1786).

⁵ *Ibid.*, 87.

⁶ Julie Hansen, "Resurrecting Death: Anatomical Art in the Cabinet of Dr. Frederik Ruysch," *The Art Bulletin* 78, no. 4 (1996), 671.

explains, “The prehistory of the object, its original context, changes radically when it is collected.”⁷ The context of eighteenth-century anatomized genitalia in collections was particularly defined by the culture of sensibility. Objectivity, a reliance on sensory proof, and a slow but growing use of quantitative measurements over qualitative interpretations were characteristic of eighteenth-century anatomy,⁸ but many of the anatomical productions and activities openly engaged the socio-cultural side of their sexual and reproductive material. The literary too explored these sexual meanings of anatomy and medicine. The finest touch of sensibility, such as the hand of Laurence Sterne’s Yorick when he feels the grisset’s pulse, mirrored the knowing touch of a physician—keenly aware of the slightest movements that disclosed the body’s physiological condition. But, this literary attention to medicine was not always so positive. Anatomy, man-midwifery,⁹ and surgery became prime targets for English satirists, like Sterne, who regularly emphasized the transgressive nature of these vocations through portraying them and their activities as sexually perverse.¹⁰

Yet, genital anatomies and physiologies elicited mixed responses from the wider public too. Some of the public was unashamedly curious to see and learn about genitals, while other segments denounced such displays and activities as immodest. As anatomized genitalia entered the Georgian public sphere, a host of questions and debates about sexuality, medicine, gender, and display culture surfaced. Anatomical preparation and display of genitalia became the nidus of eighteenth-century discourse on sexuality and sensibility. This kind of medical attention to reproductive organs also contributed to the later medicalization of sexuality. However, the eighteenth-century anatomical practices examined in this chapter show that medical understandings of male and female sexuality were the product of a wider cultural concern with the power of the organs of generation. Mechanical metaphors for both male and female genitalia were particularly reductive and precipitated the rapid dispelling of *the secrets of generation*. But, these mechanical models of both penises and wombs became proofs of how sexuality and generation involved the body and mind within the context of sensibility’s physiology.

⁷ Samuel J. M. M. Alberti, “Objects and the Museum,” *Isis* 96, no. 4 (2005), 562.

⁸ Wilson argues, “Science differs from natural philosophy not simply and perhaps not primarily in its attention to quantification, but in its use of instruments both for measurement and for the creation of artificial states and experiences.” *Invisible World*, 70.

⁹ See Karen Harvey, *Reading Sex in the Eighteenth Century: Bodies and Gender in English Erotic Culture* (Cambridge: Cambridge University Press, 2004), 181. Harvey did not mention syringe metaphors.

¹⁰ See Roy Porter, “A Touch of Danger: The Man-Midwife as Sexual Predator,” in *Sexual Underworlds of the Enlightenment*, eds. G. S. Rousseau and Roy Porter (Manchester: Manchester University Press, 1987), 207-32.

Anatomy, Sensibility, and Sex

Following in the wake of Dutch, French, Italian, and German schools,¹¹ early modern British anatomists eagerly imitated European examples, touring and training in their centres then bringing their craft back to London, Edinburgh, and sometimes smaller provincial centres. Yet, the British style retained many idiosyncrasies. As influential as this transnational exchange was, until the mid-eighteenth century the resources they dedicated to creating anatomical displays paled in comparison to some of the groups in continental cities.¹² Two major differences were in public reception and medical interpretation. Anatomical demonstrations in Britain spurred occasional revolts,¹³ new legislation,¹⁴ and frequent debates.¹⁵ Rather than dropping the curtain on anatomical pursuits, that contention cast anatomy into public discourse and encouraged anatomy to align with the ideas and customs of the culture of sensibility. From there followed another quality specific to British anatomy: the retention of vitalism, based in the nerves, within an otherwise materialist physiology.

By the mid-eighteenth century, all sorts of prepared and preserved, authentic and replicated, normal and abnormal human body parts could be seen in anatomical collections of various ilks and sizes, particularly in the English capital.¹⁶ Dissections were long-established practices,¹⁷ particularly as medical education and as public punishment. In

¹¹ See Anita Guerrini, "Anatomists and Entrepreneurs in Early Eighteenth-Century London," *Journal of the History of Medicine and Allied Sciences* 59, no.2 (2004), 6.

¹² As Guerrini noted, one difference was that the "English do not seem to have imitated the highly allegorical tableaux that the Dutch anatomist Frederik Ruysch made from body parts, [although] they admired them." *Ibid.*, 231.

¹³ See Peter Linebaugh, "The Tyburn Riot Against the Surgeons," in *Albion's Fatal Tree: Crime and Society in Eighteenth-Century England*, eds. Douglas Hay *et al* (New York: Pantheon Books, 1975), 65-117; Giovanna Ferrari, "Public Anatomy Lessons and the Carnival: The Anatomy Theatre of Bologna," *Past & Present* 117, no. 1 (1987), 60. Ferrari made the following transnational comparison: "It was apparently a custom which the local subaltern population accepted, at least in Italy where there are no records of any such sensational revolts against the surgeons and anatomists of condemned prisoners as occurred, especially in the eighteenth century, in France and England."

¹⁴ Such dissatisfaction with dissecting practices led to clauses in the Murder Act of 1752 and the Anatomy Act 1832. See Ruth Richardson, *Death, Dissection and the Destitute* (Chicago: University of Chicago Press, 2000), 50-53.

¹⁵ Ferrari discussed the early modern history of these debates in "Public Anatomy," and quoted Jacobi Philippi Tomasini's *Gymnasium Patavinum*: "In the seventeenth century an anatomist criticized Harvey for performing dissections before an audience that included not only experts but also members of 'the ignorant mass who, with their mouths hanging open, think they are witnessing wonders'" (98).

¹⁶ For an exploration of anatomical collections in London, see Simon Chaplin, "Dissection and Display." For a discussion of the anatomical schools in eighteenth-century London, see Richardson, *Death, Dissection*, 39.

¹⁷ Many historians have noted the prominent position of anatomy in renaissance Europe. e.g., Andrew Cunningham, *The Anatomical Renaissance: The Resurrection of the Anatomical Projects of the Ancients* (Aldershot: Ashgate, 1997); Jonathan Sawday, *The*

eighteenth-century Britain, anatomy had many different public images; it was an emerging, innovative, and increasingly institutional vocation,¹⁸ yet it was also repulsive, transgressive, and at times illicit.¹⁹ Its association with punishment was reinforced following the Murder Act of 1752, which designated the bodies of executed criminals to be publicly dissected or gibbeted.²⁰ The Anatomy Act of 1832 offered more access to cadavers for dissection in response to the illegal acquisition and trading of dead bodies. The changing legal context of anatomy is well documented, but there have been only cursory observations about the connections between eighteenth-century anatomy and the culture of sensibility. That connection is essential for understanding how the sexual body was understood. On the one hand, the culture of sensibility drew upon ideas about sex and nerves that anatomists described and demonstrated; on the other hand, anatomists catered to the interests and values promoted within the culture of sensibility and asserted by the fashionable.

Some of the eighteenth-century public was greatly offended by anatomical practices, yet anatomy flourished within the context of sensibility. Anita Guerrini observes that the “emerging culture of sensibility encouraged audiences to feel emotion at such events as dissections.”²¹ In France, one of the foremost proponents of sensibility, Jean Jacques Rousseau, reacted to the dissection of animals by exclaiming: “What a frightful display an anatomy amphitheatre provides: reeking cadavers, slobbering livid flesh, blood, disgusting intestines, ghastly skeletons, pestilential vapours!”²² Yet, neither anatomists nor their practices excluded them from the company and attention of the *beau monde*. Similarly in Britain, a relationship developed between the culture of sensibility and anatomical demonstration.²³ This relationship formed because sensibility was fundamentally invested in

Body Emblazoned: Dissection and the Human Body in Renaissance Culture (London: Routledge, 1995); Mary Lindemann, *Medicine and Society in Early Modern Europe*, 2nd ed. (Cambridge: Cambridge University Press, 2010), 91-97.

¹⁸ For the move to institutional anatomy collections and teaching, see Jonathan Evans, “Barts and the London’s Medical Museum Collections,” in *Anatomical Dissection in Enlightenment Britain and Beyond: Autopsy, Pathology and Display*, ed. Piers Mitchell (Farnham: Ashgate, 2012), 115-39.

¹⁹ For the illegal activities connected with the dissection of bodies, see Linebaugh, “Tyburn Riot,” 71-2; and, Richardson, *Death, Dissection*, 40.

²⁰ For the use of dissection as punishment in the Renaissance, and the context in which the Murder Act of 1752 was established, see Sawday, *Body Emblazoned*, 54-84.

²¹ Guerrini, “Anatomists and Entrepreneurs,” 12.

²² Ferrari, “Public Anatomy,” 105. Ferrari quoted Rousseau, “VIIe Promenade” of the *Rêveries d’un promeneur solitaire*, quoted in P.-M. Schuhl, “La Machine, l’homme, la nature et l’art au XIIIe siècle,” in *Rappresentazione artistica e rappresentazione scientifica nel secolo die lumi*, ed. V. Branca (Venice, 1970), 110.

²³ Ferrari argued a disharmony between society and anatomy that arose in the mid-eighteenth century: “From the mid-eighteenth century onwards, the complex harmony with the dead appears to have disintegrated. Quite apart from the rejection of capital punishment—to begin with on emotive rather than on legal grounds—there arose a certain embarrassment about

knowing how the interior of the body and the senses worked. That need for physiological knowledge allowed curiosity about sex organs to outweigh modesty. Guerrini describes how “A discourse of compassion and sensibility... formed the context for [Alexander] Monro’s lectures.”²⁴ Therefore, as Guerrini argued, Monro “would cut upon the abdomen in such a way as to produce a flap that could cover the genitals,” whereas other anatomists, such as the earlier Andreas Vesalius, would leave them open to viewing—likely responding to the same curiosity that drew the large audiences of his genital organ dissections.”²⁵ However, many bold demonstrations of genitals existed in Britain during Monro’s time, and the public seemed more interested than repulsed.

Within the spectacle engendered by anatomical demonstrations, preparations of genitalia often served as the crowning piece. Medical discussions about genitalia fell within the remit of several closely connected and overlapping vocations: anatomists, surgeons, physicians, and man-midwives. Although not all of these groups had an associated professional society, they were all recognizable and cohesive. In the 1780s, William Hunter could distinguish the number of people he considered to be part of his anatomical field.²⁶ These groups imparted their attitudes and perceptions onto the genitalia they dissected and prepared. They expressed their ideas through their selections of specimens, dissection methods, preservation techniques, display venues, graphic representations, advertising, and through many other curatorial decisions. Each group promoted specific kinds of dissection research, the use of particular instruments, particular kinds of anatomical lectures and teaching, and what texts and illustrations would be published. Man-midwives,²⁷ for instance, were characterized as an alternative to traditional female midwives, for promoting mechanical approaches to obstetrics, and as particularly consumer/fashion driven.²⁸ Even this categorization is not perfect; many midwives and male practitioners who did not affect

dissection, a sensitivity which soon developed into a feeling of outright disgust.” “Public Anatomy,” 105.

²⁴ Guerrini, “Anatomists and Entrepreneurs,” 12.

²⁵ Ibid., 10. Guerrini referred to Ferrari’s “Public Anatomy” (98).

²⁶ See William Hunter, *Two Introductory Lectures...* (London: J. Johnson, 1784), 57-60. Hunter offers a long history of anatomy, places his (disputed) discovery of the lymphatics as absorbents as one of the “two great inventions in the physiology of our bodies” since Aristotle, and declares himself as one of the greats (59).

²⁷ Initially following the practices of French accoucheurs, British man-midwifery eventually became a lucrative vocation in the eighteenth century.

²⁸ For the various historiographical stances on man-midwives within the medical market, see Adrian Wilson, “Midwifery in the ‘Medical Marketplace,’” in *Medicine and the Market in England and Its Colonies, c. 1450-1850*, eds. Mark S. R. Jenner and Patrick Wallis (Basingstoke: Palgrave Macmillan, 2007), 153-74.

to be man-midwives also shared these mechanical approaches to obstetrics.²⁹ Yet, man-midwifery was vanguard of a deeply mechanical perspective on female genitalia and obstetrics that emphasized the vitalist function of animal spirits. From the 1740s onward, many medics, especially man-midwives, presented themselves as practitioners of refined sensibilities.

From these groups sprung many anatomical collections, in which the organs of generation were usually well represented. For example, a 1784 advertisement catalogue for Rackstrow's Museum, a particularly "commercial show" of anatomical wax models and preparations,³⁰ boasted 27 lots of human body displays. Of these lots, nine featured the organs of generation. Since its opening, Rackstrow's "had become specifically connected with sexual reproduction."³¹ Although an unusual collection in many ways, Rackstrow's attention to human genitalia was not uncharacteristic of anatomical displays of that time.³² It was an era in which seeing human genitalia on écorché statues, in glass jars, or on wax models was quickly becoming more common. Even references to the sensible body in sentimental novels frequently called to mind anatomical ideas and sexual concerns. Gender politics were often prominent in these literary/anatomical crossovers.

Most recent scholarship on eighteenth-century anatomical displays of reproductive organs has singled out gender politics as a dominant cultural influence. Historians have focused almost exclusively on female bodies,³³ and have often argued that these bodies became subjects of a predominantly male, usually erotic, medical gaze. Supporting his argument with Ludmilla Jordanova's *Sexual Visions*, Hugh Crawford affirms that eighteenth-century anatomical waxes of women reveal that "the epistemology of medical knowledge involves unveiling and penetrating and that medicine is thus imbued with a masculine ideology."³⁴ While such a phenomenon is evident, eighteenth-century anatomical culture had more nuances and complexities concerning sex and gender than these

²⁹ For the history of changing practices and occupational identities involved with childbirth, see Adrian Wilson, *The Making of Man-Midwifery: Childbirth in England 1660-1770* (London: University College Press, 1995).

³⁰ Chaplin, "Dissection and Display," 107.

³¹ Craske, "'Unwholesome' and 'Pornographic,'" 84.

³² According to Craske, Rackstrow's was "substantially (not just incidentally or culturally) linked with that of the museums of William and John Hunter." *Ibid.*, 76.

³³ See Rina Knoeff, "Sex in Public. On the Spectacle of Female Anatomy in Amsterdam around 1700," *l'Homme. Europäische Zeitschrift für feministische Geschichtswissenschaft* 23, no. 1 (2012): 43-58. Commenting on gender criticism of eighteenth-century anatomy, Knoeff observes that "the male organs of generation are mostly left out of the discourse" (48).

³⁴ T. Hugh Crawford, "Imaging the Human Body: Quasi Objects, Quasi Texts, and the Theatre of Proof," *PMLA* 111, no. 1 (1996), 69. Crawford referred to Ludmilla Jordanova, "Nature Unveiling before Science," in *Sexual Visions: Images of Gender in Science and Medicine between the Eighteenth and Twentieth Centuries* (Madison: University of Wisconsin Press, 1993), 87-110.

historiographies suggest. Not all anatomical waxes of females were made and exhibited within masculine contexts. Intended audiences often included men and women, and sometimes comprised mostly women. More significantly, male genitalia regularly featured alongside female, whether in texts or exhibits. Historians have frequently interpreted anatomical displays of female genitalia as especially violent or erotic. A comparison of male and female anatomical demonstrations, such as figures 2.1 and 2.2, does not reveal the obvious sexual inequality or misogynistic attitudes some have argued. But intentional complements of male and female genitalia common in eighteenth-century anatomical displays are not depicted as such in current scholarly discussions about gender politics.

Rather, it appears that many anatomists consciously avoided eroticizing their dissection subjects. This was not modern clinical detachment, but rather an empiricist's relationship with *natural* objects. Before the late eighteenth century, when anatomies moved into institutions, anatomical demonstrations of sex organs were displayed by private collectors for commercial, educational, and social purposes. Within that context, the sociability of sensibility meaningfully influenced the relationship of the viewer to the objects: observing affected the observer's senses, which elicited mental and physical responses. In his study on Rackstrow's Museum, for example, Matthew Craske criticizes scholars for conforming "to the requirement to produce a politically tidy account of gender dynamics in eighteenth-century anatomical spectacle."³⁵ Rackstrow's falls into a larger and lingering debate as to whether eighteenth-century London bustled with prostitutes, lewd prints, and sexual liberties or upheld a polite code of conduct, modest manners, and conservative religious values. Historical accounts and modern scholarship suggest both possibilities existed within the metropolis. However, Rackstrow's was not "pornographic."³⁶ Rather, eighteenth-century curators and demonstrators of anatomical displays were typically conscientious of not causing too much public offense. But, exhibits like Rackstrow's certainly raised eyebrows and caused offense. How else would such exhibitions attract steady audiences in the British metropolis?³⁷ Often reactions to sexual and anatomical displays reveal as much about viewers' perspectives—both then and now—as they do about the eighteenth-century anatomists'. How exhibitors of anatomized genitalia negotiated the perspectives of medical and non-medical viewers reveals a fuller understanding of those activities and organs in that society.

³⁵ Craske, "'Unwholesome' and 'Pornographic,'" 79.

³⁶ Ibid. On the anachronistic use of the term "pornography," see Peter Wagner, *Eros Revived: Erotica of the Enlightenment in England and America* (London: Secker & Warburg, 1988), 5-6.

³⁷ For a discussion of the sexual character of Rackstrow's Museum, see Richard D. Altick, *The Shows of London* (Cambridge, MA.: Harvard University Press, 1978), 55-56.

Inflate, Inject, Erect

Seventeenth- and eighteenth-century medical practitioners regularly used and recommended syringes for treating maladies of male and female sexual organs. For instance, to cure barrenness *Aristotle's Compleat and Experience'd Midwife* recommended making a juice of plantain to drink and to “also inject the Juice of Plantane into the Womb with a Syringe.”³⁸ Clysters were a common remedy, so too were various urethral, vaginal, and uterine injections. Nicolas Culpeper, the famous English herbalist, recommended for females the wide use of “Garden and Wild Chamomel,” especially against the stone by injecting “the juyce of it into the bladder with a syringe.”³⁹ That remedy, according to Culpeper, also “expels wind, helps belchings, and potently provokes the terms.”⁴⁰ The famous Bath physician and biscuit name-sake William Oliver affirmed that “by the help of a proper Injection, [gonorrhoea is] quickly cur'd.”⁴¹ Therapeutically, syringes seem more associated with female reproductive disorders, although “injecting milk and oil occasionally” was used as a cure for the stones in both sexes.⁴² For treating male maladies, “The manner of performing the injection was by a catheter, having a pipe of a large ivory syringe shortened and well fixed into it, for want of a more commodious instrument.”⁴³ However, in the late seventeenth century, certain anatomical and medical techniques using syringes to inject penises prompted a theoretical connection between that instrument, that organ, and the role of animal spirits in sex and generation. The relationship between fluids within mechanical syringes inspired understandings of how animal spirits related to penises. Essentially, parallels were drawn between how animal spirits filled arousing penises, squirted out during ejaculation, and were the active, fluid element in an otherwise mechanical instrument. These physiological parallels correlated to metaphors of syringes as phalluses, which were used to critically examine male sexuality and male medics who employed those instruments.

Although used in therapies for other body parts, particularly the ear, syringes were increasingly viewed as an appliance for the privities. William Harvey discussed how he attended to “A very Honourable *Lady* in *Child-bed* falling into a feaver” and he attempted to

³⁸ *Aristotle's Compleat and Experience'd Midwife...*, 10th ed., ed. William Salmon (London, 1750), 125.

³⁹ Nicholas Culpeper, *Pharmacopoeia Londinensis, or, The London Dispensatory* (London, 1653), 16-7.

⁴⁰ *Ibid.*

⁴¹ William Oliver, *A Practical Dissertation on Bath Waters...* (London: A. Bell, 1707), 117.

⁴² B. Gooch, “Singular Effect of a large Dose of Opium,” *The Weekly Museum* (London: printed for R. Goadby and sold by J. Towers, 1774), 1: 68.

⁴³ *Ibid.*

“immit an *Injection* by a litle *Syringe*.”⁴⁴ The effect of Harvey’s intervention was that “black, clotted, and noisome *blood* did issue out, even to some certain pounds weight, whereby she received present ease.”⁴⁵ Among many cures for the “Inflations or windy Swellings in the Womb,” he recommended to “syringe into the womb the Oyl of Rue with the Decoction of hot Seeds, and roul the belly.”⁴⁶ This penetrative therapy did not go unnoticed by the medical or lewd minded. Syringes quickly became associated with genitalia, and were frequently analogized to penises.

But, this penile association gained much greater resonance as the anatomical technique of injecting that organ became more prominent. “It is not always that a penis can be thus completely and beautifully injected,” lamented the German anatomist-physician Lorenz Heister.⁴⁷ “It frequently happens, that the matter of the injection, thrown in at the vein of the back of the penis, makes its way out by the urinary passage.”⁴⁸ This instructive advice accompanied an engraved plate showing a human penis “injected with crude quicksilver”⁴⁹ (fig. 2.3). Injection, as with other emerging anatomical techniques like inflation and different mountings, was a highly valued and sought-after skill. As Charles Nicholas Jenty wrote, “THE modern Invention of filling the Vessels of Animals with a coloured Fluid, which, upon cooling, grows hard, has contributed greatly to the Improvement of Anatomy.”⁵⁰ By the late seventeenth century anatomical preparation was a fine craft that expressed aesthetics, supplied markets,⁵¹ entertained spectators, edified pupils, and investigated the form and function of human bodies. Although Heister allowed that “even miscarriages of this kind are not without their use: we discover by this the communication that there is between the urinary passage and the veins of the penis,” his chagrin at a botched preparation is evident.⁵² Injections and inflations offered more than insight into the physiology, pathology, and anatomy of generation. Heister related a deep

⁴⁴ William Harvey, *Anatomical Exercitations Concerning the Generation of Living Creatures to which are Added Particular Discourses of Births and of Conceptions* (London, 1653), 506.

⁴⁵ *Ibid.*, 506.

⁴⁶ Jean Feyens, *A New and Needful Treatise of Spirits and Wind Offending Mans Body*, trans. William Rowland (London: 1668), 108.

⁴⁷ Lorenz Heister, *A Compendium of Anatomy...* (London: W. Innys *et al.*, 1752), 476.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*, 474.

⁵⁰ Charles Nicholas Jenty, “The Art of Preparing and Preserving the Parts of Human Bodies...,” in *A Course of Anatomico-Physiological Lectures on the Human Structure and Animal Oeconomy...* (London: printed for James Rivington and James Fletcher, 1757), preface, clxvii.

⁵¹ For a comment on the pluralities within and the blurred boundaries between medical vocations in the early modern medical market, see Mark S. R. Jenner and Patrick Wallis, eds., *Medicine and the Market in England and Its Colonies, c. 1450-1850* (Basingstoke: Palgrave Macmillan, 2007).

⁵² Heister, *Compendium of Anatomy*, 476.

appreciation for the beauty of these preparations. His fellow anatomists, both in Leiden and further abroad, similarly appreciated such preparations for their craftsmanship and beauty. Preparing male genital organs, such as erecting a flaccid and morbid penis by injection or inflation and injecting testicles, showed anatomical skill and discovered physiological features, especially the nature of sexual fluids.

Instrument modifications, embalming methods, dissection practices, anatomical jargon, and display styles rapidly developed after the 1650s, and particularly in relation to the organs of generation. These organs represented an area of new and exciting research, wherein anatomists established their names and legacies. Yet, anatomists not only *made* their names by researching genitals, they *gave* their names. From the late seventeenth to the late eighteenth century, a significant cohort of anatomists achieved such an honour: Highmore's body, Graafian follicles, Poupert's ligament, Cowper's glands, Littre's glands, Bartholin's glands, tunica Ruyschiana, Fallopian tubes, and the Wolffian duct. Ruysch gained more international and royal recognition for his special, secret preservation fluid.⁵³ Renown was also seized by those who excelled at injections. Accolades were given to anatomists like Adriaan van den Spiegel, Francis Glisson, Giovard Bidloo, and William Cowper for corrosion casting (injecting vasculature or a potential space with a hardening fluid then dissolving the remaining soft tissue, leaving only the form of the injection). Numerous others achieved notability through injections and inflations during that techniques' heyday, which began in the mid-seventeenth century and extended a little over a century. By the close of the eighteenth century endeavour and innovation in those anatomical techniques dwindled.⁵⁴

But during their heyday, injections and inflations were vigorously used in experiments on genitalia. Anatomists inflated various structures and cavities, tweaking and measuring the process of drying and preserving. They also tried injecting numerous substances beside mercury: tin, lead, bismuth (and other metals), talc, plaster of Paris, alcohols (including brandy and wine), various waxes, oil of lavender, starch, turpentine (and other resins), urine, and animal extracts, including fat, suet, tallow, and spermaceti. Liquids

⁵³ See Tony Walter, "Plastination for Display: A New Way to Dispose of the Dead," *The Journal of the Royal Anthropological Institute* 10, no. 3 (2004): 603-27. "From the early eighteenth century, it became possible to preserve organs in solution, enabling their display in jars" (605). For a detailed history of Ruysch's innovations, see Harold J. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven, CN: Yale University Press, 2007), 268-88. Cook also highlights the anatomical embalming methods of Lodewijk De Bilz (271-9).

⁵⁴ Francis Joseph Cole, "The History of Anatomical Injections," in *Studies in the History and Method of Science*, ed. C. J. Singer (Oxford: Clarendon Press, 1921), 2: 287, 335. According to Cole, "After the Hunter's, no important development in injection methods is to be recorded until the introduction of the 'soluble' form of Prussian blue, and carmine gelatine and other precipitates as colouring matters, in the nineteenth century" (335).

were coloured with cinnabar, verdigris, vermilion, red oxide of lead, carmine, and indigo. Syringes underwent several modifications by anatomists, medical practitioners, and—because of their interest in mechanical principles of pump and suction—natural philosophers. Such modifications included new sizes and materials, filling without removing the nozzle, fine-point and curved nozzles, flexible outflow pipes made of leather, increased watertightness, and plungers with greater smoothness and delicacy (fig. 2.4). The growing use of syringes in anatomy corresponded to their growing use in medicine, especially in reproductive and sexual therapies. Medical application led to further modifications, like the sex-specific “Yard Syringe” and “Womb Syringe,” as the surgeon John Marten described.⁵⁵ For inflation, pipes, bellows, and syringes conveyed air into organs, and different varnishes preserved those tissues once dried. Although some anatomists guarded their experiments, methods, and improvements as secrets, others freely shared their discoveries to aid understandings of generation and further their personal reputations.

The English surgeon Thomas Gibson published his own and other anatomists’ procedures and discoveries, which included careful instructions about inflating penises that Regnier de Graaf had originally published.⁵⁶

Let the Yard be prepared thus: First gently squeeze the blood out of it, which it always has in greater or lesser plenty, and then put a little Tube into the spongy substance, namely in at that end which is next to the *Os pubis*; and let the Cavity of the *Penis* be half fill’d with water by the help of a Syringe, and shake the *Penis* with the water in it: pour out that bloody water, and fill it again with clear, and so three or four times till the water is no longer stain’d with blood. Then betwixt two linen clothes squeeze out what water is in the Nervous bodies, and at length blow up the *Penis* so long till it have its natural bigness; in which posture if you will keep it, you must tye it hard. When the *Penis* is thus distended and dried, you may examine it as you please.⁵⁷

Aside from an eye for scientific examination, aesthetic taste significantly directed such preparations of penises, as suggested by Gibson’s advice to enlarge the specimen to “its natural bigness.” Such aesthetic sense corresponded to an ideal pursued by anatomists and natural philosophers: to “approach the *pura Naturalia*, in our Description and Expression.”⁵⁸ Instruction in method and a particular aesthetic for these preparations were further

⁵⁵ John Marten, *A Treatise of all the Degrees and Symptoms of the Venereal Disease, in both Sexes...*, 6th ed. (London: S. Crouch *et al.*, 1708), 46.

⁵⁶ Raymond Stephanson, *The Yard of Wit: Male Creativity and Sexuality, 1650-1750* (Philadelphia: University of Pennsylvania Press, 2004), 73-8.

⁵⁷ Thomas Gibson, *The Anatomy of Human Bodies Epitomiz’d...* (London: M. Flesher, 1682), 126.

⁵⁸ *A Philosophical Essay on Fecundation: Or, an Impartial Inquiry into the First Rudiments, Progression and Perfection, of Animal Generation...* (London: J. Roberts, 1742), 13.

disseminated through engraved illustrations. For instance, figure 2.5 from James Drake's 1707 treatise *Anthropologia Nova* visually demonstrates how to inflate a penis, showing where to insert the blow pipe and where to place ligatures to capture the air. Preparing, displaying, and representing any body part was (and is) a highly selective process. In late seventeenth- and early eighteenth-century illustrations, models, or preparations of genitals, particular features were intentionally emphasized by the anatomist or engraver. Such was the case in the choice of bright dyes in the wax penis shown in figure 2.6. This injected preparation gives a sense of engorgement while highlighting the distinction between the corpus spongiosum and corpus cavernosa through the contrast of vermilion and brown dyes. Anatomists intentionally made these dissected male organs to be eye-catching and gaudy in hopes of eliciting observation and comment.

These bold genitalia displays occupied a complex and diverse space in Georgian society by pervading various divisions, such as class, gender, vocation, and education. For instance, both a demonstrator's pride and the public's curiosity are evident in the 1741 advertisement for "A Likeness of the Human Penis Prepared with a Waxen Injection Displaying Some New Anatomical Discoveries"⁵⁹ (fig. 2.7). A coloured mezzotint engraving of dissected testes by Joanne Ladmiral accompanied this advertisement for Bernhard Siegfried Albinus's anatomical exhibit. Such shows were part of a small but very visible eighteenth-century museum market for anatomical preparations that emerged mid-century, and often featured cadaveric penises, uteruses, testicles, breasts, and other such reproductive organs. Two such exhibits in London were Rackstrow's Museum in Fleet Street and the more temporary exposition of Guillaume Desnoues's preparations, both of which dedicated several displays to human genitalia. Many different advertisements published in the 1730s described Desnoues's wax works, the collection first being shown in Somerset House, then offered at auction at the Great Room, and later exhibited at the corner of Durham-Yard, all in the Strand. The auction held in May of 1736, conducted by the aptly named Mr Christopher Cock, was advertised by one such catalogue, which doubly served as a ticket for viewing the collection, priced at one shilling. This advertisement, like the others, used surprisingly technical anatomical language. Lot 31, for example, showed "the Figure of a Man" that included "the spermatick Vessels to the Testicles, the differing Vessels from the Epididymis to the Vesiculae Seminales into the Urethra."⁶⁰ Such technical jargon conferred a learned tone to the exhibit—entirely empirical, gentlemanly, and separate from low

⁵⁹ Translation by Andrew Klein.

⁶⁰ Christopher Cock, *A Catalogue of Several Curious Figures of Human Anatomy in Wax...* (London, 1736), 12-3.

concerns.⁶¹ Promoting civility further, both 1736 catalogues specify that gentlemen were to view the exhibit on alternating days of the week from the ladies. While the exhibit seems to have an equally represented and intermixed display of both sexes' reproductive organs, viewing these objects was done by one gender at a time. Such conscious attempts to show genitalia in a respectable and modest manner betray awareness that the exhibit contained potentially erotic material. Successful exhibitors tactfully used sexual curiosity to draw crowds to see natural curiosities, while remaining respectable.

However, erotica was not the central intent or trade of these and other exhibits of anatomized genitalia. Rackstrow's Museum, for instance, consistently featured reproductive organs, which, according to its advertisement catalogue, amounted to a third of its total anatomical displays. Nonetheless, Rackstrow's attention to human genitalia was not unusual for anatomical collections of that time, and, as Craske rightly argues, previous "derisive assessments" of that exhibit as pornographic are not accurate.⁶² In eighteenth-century anatomical culture, boundaries between medical and erotic, licit and illicit, edifying and sensational, were muddled and rarely mutually exclusive—reminiscent of that period's confused spectrum of respectable and quackish medicine. Rackstrow's specimens, like those shown by esteemed anatomists, raised eyebrows and shocked the modest. But, these displays of genitalia gained legitimacy or decency through their edifying role: Rackstrow's hosted medical courses and, at least in the 1770s and 1780s, a midwifery clinic.

Desnoues's catalogue reveals how the design and placement of exhibits of organs of generation conveyed certain meanings. In particular, the genital and the cerebral were oriented to reflect their association. Lot 29 "Represents a Woman, the Skull of which is taken off, shewing the upper part of the Brain, with part of the *Dura Mater*; the Belly also opened, which shews the Womb with the Situation of the Child in it"⁶³—an odd display that brings the neural and reproductive into simultaneous examination. Similarly, the final lot describes miscellaneous pieces, including "the lower part of the Brain, with the Origin of the ten pair of Nerves coming out of it, and the *Medulla Oblongata*: a womb with the Eggs, and the *Fallopian Tubes* communicating to the Womb; the internal Orifice, the Fibres of the *Vagina*, and the cavernous Bodies of the *Clitoris*: You have there too the external parts of the *Penis* with the Fore-skin."⁶⁴ Although it is uncertain how intentional the author of Desnoues's advertisement was in juxtaposing the brain and the organs of generation, other

⁶¹ cf. Mary Fissell, *Vernacular Bodies: The Politics of Reproduction in Early Modern England* (Oxford: Oxford University Press, 2004). Fissell has analyzed early modern vernacular discussions of reproduction.

⁶² Craske, "'Unwholesome' and 'Pornographic,'" 75.

⁶³ George Thomson, *Syllabus. Pointing Out Every Part of the Human System...the Anatomical Wax-Figures, of the Late Monsieur Denoue...* (London: J. Hughes: 1739), xvii.

⁶⁴ *Ibid.*, 35.

anatomical descriptions also emphasized the near relation between the mental and the genital.

The blend of sexual curiosity, experimental design, anatomical craft, and higher learning added value to preparations of male genitalia when sold to collectors. The 28th of April, 1769 was advertised as the first of a two-day auction of a surgeon's anatomical preparations and paraphernalia held "At *Essex-House* in *Essex-Street*, in the *Strand*."⁶⁵ Surveying the catalogue of mounted body parts and anatomical instruments, it is striking how many preparations of both female and male genitalia were on sale. A simple dry mounted injected penis went for two shillings, and a wet mount of an injected glans penis was taken at four.⁶⁶ A larger dry mount that included part of the pelvis, penis, urethra, prostate gland, seminiferous vesicles, and bladder, all shown in "their natural State of Connexion," fetched ten shillings and six pence.⁶⁷ For surgical instruction, there was a "compleat Preparation of the Parts concerned in Lithotomy," which cost a considerable one pound, nine shillings.⁶⁸ For the anatomist in the crowd, perhaps the most interesting object was a testicle of a horse with "Part of the Epididymis fill'd with Quicksilver, and a Portion of the Vesicula Seminalis from the same inflated."⁶⁹ A similar injected testicle preparation had recently been at the centre of a highly publicized dispute between William Hunter and Alexander Monro *secundus*, and an anatomical collector may have happily parted with the two shillings being asked for such a prize.

Both prominent mid-eighteenth-century anatomists, Hunter and Monro came to loggerheads over certain discoveries, and most importantly about who first successfully injected an epididymis and seminiferous tubules with mercury, thereby demonstrating the nature of the lymphatics. As Charles Ambrose recently chronicled, this print-based dispute quickly grew into a family feud, involving Alexander's brother Donald Monro, their father Alexander Monro *primus*, and William's brother John Hunter.⁷⁰ Monro *secundus* claimed that "On the 9th of *January* 1753, in attempting to make such a preparation, I was so lucky as to impel the quicksilver still farther into the seminal ducts than Dr. HALLER had done; making it fill, for a considerable length, a very great number of the serpentine ducts of the

⁶⁵ Samuel Paterson, "A Catalogue of Anatomical Preparations and some Anatomical Apparatus, the Property of a Surgeon (Who has declined Lecturing)..." (London, 1769), 1.

⁶⁶ *Ibid.*, 2, 7.

⁶⁷ *Ibid.*, 3.

⁶⁸ *Ibid.*

⁶⁹ *Ibid.*, 2.

⁷⁰ Charles Ambrose, "The Priority Dispute Over the Function of the Lymphatic System and Glisson's Ghost (the 18th-Century Hunter-Monro Feud)," *Cellular Immunology* 245, no. 1 (2007): 7-15.

testis.”⁷¹ Monro gave further proof by insisting, “This preparation was publicly demonstrated, the very next day, to the Gentlemen attending the College of Anatomy at *Edinburgh*” and that “Above a year and a half thereafter, I printed an account of this preparation, with figures”⁷² (fig. 2.8). William’s priority claim also followed a demonstration of an epididymis filled with mercury, one which he had filled and one filled by John. This mercury preparation revealed the delicate continuity of the epididymis with the seminiferous tubule, described as follows:

About the beginning of November, 1752, in presence of Mr. Galhie, and some others, I injected the *Vas deferens* in the human body with mercury, and by that method filled the whole *Epididymis*, and the tubes that come out from the body of the *Testis* to form it: and observed, in this operation, that the mercury continued to run, and the body of the *Testis* to become gradually more turgid and heavy, for some time after the external parts were completely filled.⁷³

These two claims about injecting testicles, along with other disputes, provided a seven-year-long paper war that included plagiarism accusations, defamatory remarks, and personal defences. Hunter gained the last word by publishing several witness accounts testifying to the public demonstration of his mercury injected epididymis.

For more than a century prior anatomists endeavoured to entirely inject a testicle’s epididymis and seminiferous tubule, as Hunter and Monro had done. As Francis Cole described, de Graaf was “the first to figure an injecting syringe of the modern pattern, and is credited with having injected mercury into the spermatic vessels,”⁷⁴ which he showed in his published *De Virorum Organis Generationi Inservientibus* in 1668 (fig. 2.9). William Cowper detailed this preparation in his 1698 anatomy text *The Anatomy of Humane Bodies*, which included an engraved plate illustrating testicular anatomy (fig. 2.10). “Fig. 1” on the lower right was described as showing “the Blood-Vessels of the Testicle call’d *Vasa Praeparantia*, as they Appear before any Injection or Inflation is made into them.”⁷⁵ Cowper presented these non-inflated, non-injected vessels as truer representations of what was seen on the dissecting table, rather than what was in a living person. By the early eighteenth century, Herman Boerhaave reported injecting a boar’s testicles, which animal subject was

⁷¹ Alexander Monro *secundus*, *Observations, Anatomical and Physiological, wherei’n Dr. Hunter’s Claim to some Discoveries is Examined* (Edinburgh: Hamilton, Balfour & Neill, 1758), 6.

⁷² *Ibid.*

⁷³ William Hunter, “Critical Review for Nov. 1757, Art. IX,” in *Medical Commentaries. Part I*, 2nd ed. (London, 1777), 1.

⁷⁴ Cole, “Anatomical Injections,” 297.

⁷⁵ William Cowper, *The Anatomy of Humane Bodies with Figures...* (Oxford: S. Smith and B. Walford, 1698), 102.

chosen because his gonads were “very large in Proportion to his Body.”⁷⁶ Boerhaave’s colleague Ruysch also injected seminiferous tubules.⁷⁷ Although these injections met with some success, Boerhaave confessed that “even to the present Day we have been able to inject only a few arterial Branches spread upon the membranous Partitions of the Testicle.”⁷⁸ Cole recounted how for Ruysch, two exceptions to his theory of “vascular autocracy were admitted—the ovary and testis, the fabric of which Ruysch was never able to prepare by injection.”⁷⁹ Many other anatomists also attempted to inject testicles to reveal their structure and form, which history of failed attempts made such a preparation a tempting and crowning achievement for both Hunter and Monro.

Hunter was particularly pleased with the preparation he injected in November of 1752, and kept it for several years. Another similar injection graced John Hunter’s anatomical collection, which, in the current-day Hunterian Museum in Lincoln’s Inn Fields in London, stands out as the most ornately presented item (fig. 2.11). That preparation of a boar’s epididymis at once represents anatomical craftsmanship, experimental innovation, and personal vindication. It is said that John Hunter displayed this piece not in his museum collection, but in his dining hall. With its moderately rococo gilt frame and intricate setting, this object seems more like a delicate piece of jewellery, which appearance shows the value imbued in such anatomical preparations of genital material. Such is this anatomical preparation that only the initiated could surmise what body part moulded its shape. Yet, its display and setting represented to the knowing viewer the culmination of that long-sought-after anatomical accomplishment.

Peaking mid-century, dissecting and preparing genitalia progressively informed anatomical, physiological, and pathological understandings of generation.⁸⁰ Anatomists, and subsequently a wider public, viewed inflations and injections as demonstrating how genitalia worked. These highly reproducible techniques showed the form of genital organs, circulation of blood and spirits, the maternal/foetal divide in the placenta, the intricate connections within genito-urinary tracts, and the nature of the lymphatic system. But, a particular point of fascination was the physiology of erection and ejaculation. Anatomists had more ready success at injecting and inflating penises for demonstrating the form and

⁷⁶ Herman Boerhaave, *Dr. Boerhaave’s Academical Lectures on the Theory of Physic...* (London: W. Innys, 1742-46), 5: 54.

⁷⁷ *Ibid.*, 50.

⁷⁸ *Ibid.*, 65.

⁷⁹ Cole, “Anatomical Injections,” 306.

⁸⁰ See George Rousseau, *Nervous Acts: Essays on Literature, Culture and Sensibility* (Basingstoke: Palgrave Macmillan, 2004), 15. Commenting on the cultural and medico-scientific contexts needed to “make a case for causal relations between anatomy and human behaviour,” George Rousseau suggested that such a movement began during the seventeenth century and continued to emerge during the “transformative period 1650-1700.”

function of erection. Boerhaave noted that Jan Swammerdam first demonstrated “that the true Cause erecting the Penis was, the arterial Blood filing the three cavernous Bodies.”⁸¹ Likewise, the surgeon, physician, and anatomist Sir Edmund King investigated not only “the connexion between the vas deferens, seminal vesicles, and urethra by injections,” but also how “the penis can be erected after death by injecting the internal iliac artery.”⁸² Those anatomical techniques showed the physiology of the male penis, especially how the circulation of fluids filled that organ and connected it to the body and mind.

The two processes conceptualized in terms of these preparation techniques—penile engorgement as the process of inflation or injection, and ejaculation as a syringe’s squirt—reinforced the idea that animal spirits were central in male sexuality and reproduction. Like the hydraulics of injecting a penis, animal spirits that were excited by desire or pleasure filled the cavernous tissues in sexual arousal. Similar to the loss of injecting fluid upon applied pressure to a syringe plunger, the convulsions of orgasm squirted out ejaculate, contributing to the sum loss of the body’s animal spirits. This syringe/penis analogy neatly accommodated the fluid nature of animal spirits within mechanical and circulation models. Inflation also became a model for the physiology of erection. Gibson described how the “Nervous bodies” of the penis “puff up like Bellows when the Yard is erected.”⁸³ A mixture of blood and animal spirits rushed into the spongy tissue, distending the organ just like inflating with air or injecting with fluid. A few years later, such inflations were lampooned in the third book of Jonathan Swift’s *Gulliver’s Travels*. While visiting the learned professors at the Grand Academy of Lagado, Gulliver enters a laboratory wherein a “great physician” blew air into the anus of a dog as a method of curing colic.⁸⁴ Swift comically emphasized the perversity and absurdity of medical approaches to private areas of the body, which included the growing fashion of inflation demonstrations made by natural philosophers and anatomists. These mechanistic interpretations, as Emily Booth suggests, led anatomists to be “guided by a concern to discover the physical evidence of a hydraulic system for the conveyance of spirits.”⁸⁵ Thomas Bartholin, the eminent Danish natural philosopher and anatomist, depicted nerves as “conduit pipes” and the brain as a pump, which dilated to draw “vital Spirit with arterial blood out of the Carotick Arteries, and Air

⁸¹ Boerhaave, *Academical Lectures*, 5: 85.

⁸² Cole “Anatomical Injections,” 300.

⁸³ Gibson, *Anatomy of Human Bodies*, 133.

⁸⁴ Jonathan Swift, *Travels into Several Remote Nations of the World...* (London: printed for Benj. Motte, 1726), 2: 68

⁸⁵ Emily Booth, “A Subtle and Mysterious Machine”: *The Medical World of Walter Charleton (1619-1707)* (Dordrecht: Springer, 2005), 106.

by the Nostrils” and contracted to force “Animal spirits into the Nerves.”⁸⁶ Boerhaave also used mechanical descriptions for how prostatic fluid could “lubricate the Urethra almost like an Oil.”⁸⁷ Fluid dynamics and mechanical parts explained the workings of both nerves and male genitalia.

Applying these mechanical terms to penises conjured up images of a syringe. The seventeenth-century Dutch anatomist Isbrand van Diemerbroeck gave an early account of this blood and spirits physiology of erection, and its analogy to a syringe.

When the Animal Spirits, with the hot Arterious Blood, flow more plentifully into it out of the Nerves and Arteries, then the Yard grows hot and extends it self: but when the Spirits cease to flow into it, then the more copious Blood and Spirits already within it, are suckt up by the little Branches of the small Veins, and then the Yard falls again. Now that the Yard is extended by the influx of Blood and Spirits, is easily demonstrated in Bodies newly dead: for if you immit Water through a Syringe thrust into the Orifices of the Veins, and then force that Water forward toward the nervous Bodies, we shall find the Yard to be extended in the same manner, as we find it stiffen'd in those that are alive by the Influx of Blood and Animal Spirits.⁸⁸

Diemerbroeck, like his contemporaries, perceived preparing an erect morbid penis using a syringe and water as being “in the same manner” as an erection *in vivo*.

Although this injection experiment did not use either blood *or* animal spirits, it was interpreted as proof of those substances’ central function in erections. The language Diemerbroeck used, including his reference to “nervous Bodies,” construes this physiological role of animal spirits as *a priori* knowledge. In other words, animal spirits were proven to be essential to erections—and numerous other reproductive processes—through anatomical experiments, but without ever actually experimenting with animal spirits. Although always absent in these anatomical demonstrations, animal spirits were the crucial factor for initiating erections, whether voluntary or involuntary. How volition related to sexual arousal was explored both in this nervous physiology and through metaphors linking penises to syringes. Thomas Willis described how venereal sensation in the genitalia made “Spirits flock thither,” causing engorgement, perpetuating pleasure, and conveying desire back to the mind.⁸⁹ Injections and inflations, according to anatomists, replicated that

⁸⁶ Thomas Bartholin, *Bartholinus Anatomy made from the Precepts of his Father, and from the Observations of all Modern Anatomists, together with his Own...* (London: John Streater, 1668), 322, 135.

⁸⁷ Boerhaave, *Academical Lectures*, 5: 77.

⁸⁸ Isbrand van Diemerbroeck, *The Anatomy of Human Bodies...*, trans. W. Salmon (London: W. Whitwood, 1694), 151. This treatise was first published as *Anatome corporis humani...* in 1672. The first English edition was published in 1689.

⁸⁹ Thomas Willis, “Of the Scurvy,” in *Dr. Willis’s Practice of Physick...* (London: T. Dring, C. Harper, and J. Leigh, 1684), 158.

surge of animal spirits and blood during arousal, which affirmed notions of a mutual nervous influence between the groin and the brain.

However, sometimes the animal spirits residing within genitalia became excited without influence from the mind. This was spontaneous and involuntary arousal. The concern about involuntary arousal was that it was beyond the control of the will, and could also negatively influence thoughts, desires, and behaviour. Often described as the most sensible part of the body, sex organs represented a vulnerability to external influences that could incite lascivious feelings and lustful ideas, which threatened to overcome cool reason. This understanding of animal spirits and the organs of generation—of mechanics and fluids—encompassed concerns about free will, sexual behaviour, public decorum, and mankind’s sinful nature. These physiological, philosophical, and moral concerns were not limited to discussions among the medically educated; rather, these ideas were openly presented to the lay public, particularly through anatomical displays. To return to Rackstrow’s Museum, their catalogue descriptions of the anatomical works on show included detailed commentary on sexual physiology. Entry number 16 specifies “that a larger quantity of blood is thrown into the Penis by the Arteries, than the veins are capable of returning in a given time; in consequence of this, the Penis begins to swell.”⁹⁰ Entry 18, which was a wax representation of a woman’s parts of generation, offers some strangely in-depth comments about the physiological and philosophical ideas connected with viewing these preparations. It details how the clitoris “probably conveys similar impressions, or affections, to a Woman, with those conveyed by the Penis to a Man.”⁹¹ Such commentary directly compared the sexual anatomy, physiology, and experiences of the two genders while drawing attention to how genitalia affected thought, volition, and behaviour. These demonstrations correlated with physiological ideas, such as Julian Offray de La Mettrie’s observation that maternal imagination affecting fetuses happened “in the same manner as soft wax receives all sort of impressions.”⁹² Although anatomists presented their preparations and descriptions of penises as true reflections of physical realities or *after nature*, in actuality, such representations pointedly responded to prevailing social anxieties and cultural preoccupations about male sexuality.

Several medical authors cited concerns about male reason succumbing to irrational sexual desires, which led to loose living and social disorder. As Faramerz Diabhoiwala argues, “lust was acknowledged to be such a dangerous force that great value had

⁹⁰ Rackstrow’s Museum. *A Descriptive Catalogue (Giving a Full Explanation) of Rackstrow’s Museum...* (London, 1784), 10-11.

⁹¹ *Ibid.*, 12.

⁹² Julien Offray de La Mettrie, *Man a Machine; Translated from the French of the Marquiss D’Argens* (London: W. Owen, 1749), 61.

traditionally been placed on its mastery.”⁹³ These concerns about male sexuality were responded to through animal spirit physiology, depictions of sensibility, and anatomical demonstrations. That animal spirits coursed through nerves, communicating desires, and crucially connecting the mind and genitals, became imprinted on the experiments, preparations, and observations involving injections and inflations. Yet, the association of syringes and male genitalia gained much wider influence as the terms and ideas of anatomical injections and inflations were appropriated by literary authors for metaphoric descriptions of the sexual and sensible body.

Sexual Syringe Tropes

Other body parts, however, were also analogized to syringes. For example, the physician John Cook suggested that “the Heart is a wonderful Machine like unto Syringes, serving to propel the Blood over the whole Body, and so is the fountain of all our Heat and Motion.”⁹⁴ Yet, associations between syringes and genitalia were much more pervasive. Syringes were not specific to high-minded concerns of medicine or anatomy; rather, syringes became common sexual devices. Concerning the limits of using syringes, Bartholin gave his fellow practitioners this advice: “the womb draws the Seed into it, which being conceived, it is said to be shut so close, that the point of a needle cannot enter. And therefore Physicians do vainly squirt Liquors there into with a Syringe, and Whores endeavour in vain to draw out the Conception.”⁹⁵ This final clause about abortion suggests that by the 1660s syringes were already incorporated with both the high and low professions involved with the sex organs. This low and lewd association of syringes is further evidenced by literary metaphors.

A verse from the ballad “Pretty Pegg of Wandsor,” written by Thomas D’Urfey, published in 1719 by Henry Playford, and set to a tune in B minor, mocks the therapeutic use of glister syringes as perverse:

The Doctor her half Sainted,
For Cures controuling Fate;
That has warm Engines planted,
At many a Postern gate:
If Peggy once were ill,
And wanted his Skill,

⁹³ Faramerz Dabhoiwala’s discussion of George Duffus and homosexuality, *The Origins of Sex: A History of the First Sexual Revolution* (London: Allen Lane, 2012), 149.

⁹⁴ John Cook, *An Anatomical and Mechanical Essay on the Whole Animal Oeconomy* (London: W. Meadows, 1730), 36. La Mettrie in *Man a Machine* (56) described a medical procedure that correlated to Cook’s physiological observations: “A simple injection of warm water reanimates the heart and muscles, according to Cowper.”

⁹⁵ Bartholin, *Bartholinus Anatomy*, 72.

He'd soon bring her to Death's door;
By Love made blind,
Slip from behind,
And make his Injection before.⁹⁶

The poem contains several typical bawdy metaphors: penises as engines, vaginas as postern gates, and orgasms as dying. Coitus and semen were prescribed in both earnest and jest as a cure, most frequently for greensickness, as many eighteenth-century ballads depict. But, in this ballad excerpt the most prominent trope is the Doctor's injection. Such lewd figurative meanings for "syringe" corresponded to both a mounting suspicion towards the morals of medical practitioners, such as quacks and man-midwives, and a growing association between that instrument and penises, as presented in medical and anatomical discussions.

According to Gordon Williams' *A Dictionary of Sexual Language and Imagery in Shakespearean and Stuart Literature*, the use of glister syringe as a metaphor for penis dates back as early as 1536;⁹⁷ by the seventeenth century, this metaphor was common stock. For instance, a couple of other early eighteenth-century satires use Syringe as a comic name for surgeon figures.⁹⁸ These caricatures reflected how injections had become widely advertised and prescribed treatments for treating venereal complaints.⁹⁹ The linguistic register associated with syringes, including terms and ideas of injecting and squirting, was used in imagery and description of male sexual organs, fluids, and actions. This kind of language signified a broader literary adoption of physiological ideas about nervous and sexual fluids moving between the brain and, the otherwise mechanical, male genitals. Even early in the century, the sexual sense of syringes and injections had become firmly established in non-medical discussions. *The Works of the Earls of Rochester, Roscommon, Dorset, &c.* that the infamous Edmund Curll published early in the century was anthologized with a collection of bawdy works called *The Cabinet of Love*, which included "The Delights of Venus."¹⁰⁰ That poem employs a standard erotic narrative, in which an experienced woman gives a virgin maid detailed sexual advice. The piece concludes with the maid praising her tutor:

She taught me first the Raptures which proceed

⁹⁶ Thomas D'Urfey, "Pretty Pegg of Wandsor," in *Songs Compleat, Pleasant and Divertive; Set to Musick...*, ed. H. Playford (London: printed by W. Person for J. Tonson, 1719), 2: 130.

⁹⁷ Gordon Williams, *A Dictionary of Sexual Language and Imagery in Shakespearean and Stuart Literature* (London: Athlone Press, 1994), 601-3.

⁹⁸ See Banish'd Hermit [pseud.], *Democritus, the Laughing Philosopher's Trip into England* (London, 1723); *The Adventures of a Kidnapped Orphan* (London, 1747).

⁹⁹ Thomas Bayford, *The Effects of Injections into the Urethra, and the Use and Abuse of those Remedies...* (London: J. Whiston, 1773), 9.

¹⁰⁰ For the reputation and publishing practices of Edmund Curll, see Paul Baines and Pat Rogers, *Edmund Curll, Bookseller* (Oxford: Oxford University Press, 2007).

From the Injection of Man's gen'rous——.¹⁰¹

Seed was invested with animal spirits that, as suggested by this couplet and contemporaneous medical writings, endowed pleasure upon contact with the sensitive genital organs. Prose writings also explored these syringe metaphors and ideas about animal spirits and seed.

Also printed in the early part of the century, *The Amours of the Marshal de Boufflers* included a scene wherein the incorrigible rake and eponymous protagonist is upbraided by his laundress, Judith. “*O what a pretty sort of Clyster you were about to apply to me!*”¹⁰² Through figurative meanings, Judith accuses de Boufflers of attempting anal sex with her. When pressed about this scandalous attempt, de Boufflers offers to try “the proper place where such Applications ought to be made.” The trope continues as a verb with de Boufflers commenting “let us try whether I can Syringe you right there or not”—he does. In this episode, the syringe metaphor as a euphemism enables the discussion of offensive sodomitical practices, which would otherwise have probably received censure. But, the same metaphor was also used as a direct and technical expression of transgressive sexual acts, particularly in criminal cases. In May 1722, the fifteen-year-old James Booty was tried in court for the rape of five-year-old Ann Milton.¹⁰³ During the proceedings, a witness surgeon, Mr Holloway, was asked “Do you think she [Ann Milton] could have been infected in that Manner, if there had not been an *Emissio Seminis*?”¹⁰⁴ Holloway reasoned that such a “Disease may be communicated by the Emission of an infectious Matter, without a seminal Injection.”¹⁰⁵ Many other court testimonies from medical specialists invoked a similar usage of “injection.”¹⁰⁶ The trial of George Duffus for sodomy concluded that “The Spermatick Injection not being proved, the Court directed the Jury to bring in their Verdict *Special*.”¹⁰⁷ During the eighteenth century, “Spermatick Injection” equated to the legal categorization of “*Emissio Seminis*,” meaning where an ejaculation occurred—a requisite proof for many rape and sodomy cases. On several occasions medical practitioners witnessing in trials of sexual

¹⁰¹ “The Delights of Venus,” in *The Works of the Earls of Rochester, Roscommon, Dorset...*, 4th ed. (London: E. Curll, 1714), 24.

¹⁰² D. P. E., *The History of the Amours of the Marshal de Boufflers...*, 2nd ed. (London: printed for E. Mory, 1726), 212.

¹⁰³ *Select Trials at the Sessions-House in the Old Bailey, for Murder, Robberies, Rapes, Sodomy...* (London: printed by J. Applebee for J. Hodges, 1742), 1: 198-201.

¹⁰⁴ *Ibid.*, 199.

¹⁰⁵ *Ibid.*, 191.

¹⁰⁶ A 1727 case brought against Thomas Padget of Fulham for the rape of 5 year old Catherine Burchet found the accused guilty because a shared infection suggested “an Injection had been made on the Orifice.”

¹⁰⁷ *Ibid.*, 107. See Dabhoiwala’s discussion of George Duffus and homosexuality, *Origins of Sex*, 129, 131.

crimes directly introduced their understandings and terminology that linked syringes with male organs of generation.

Cleland's notorious erotic novel, *The Memoirs of a Woman of Pleasure, or Fanny Hill*, shows the penis-syringe trope to be firmly entrenched in the mid-century's erotic register. For instance, one episode wherein Fanny copulates with her lover describes, "I touched that sweetly critical point, when scarce prevented by the spermatic injection from my partner spurting liquid fire up to my vitals, I dissolved, and breaking out into a deep drawn sigh, sent my whole sensitive soul down to that passage where escape was denied it, by its being so deliciously plugged and choked up."¹⁰⁸ More than merely resorting to medical jargon for variation's sake, Cleland's erotic imagery and depictions of sexual bodies were profoundly physiological. For example, Cleland described how Fanny and her fellow prostitute Louisa arouse the penile erection of an unwitting lad: "by all the irritations we had used to put the principles of pleasure effectually into motion, and to wind up the springs of its organ to their supreme pitch; and it stood accordingly stiff and straining, ready to burst with the blood and spirits that swelled it... to a bulk!"¹⁰⁹ This portrayal, like many others in *Fanny Hill*, recalls a physiology of erection based on mechanics, blood, and spirits that medical figures like Swammerdam, Boerhaave, and Bartholin had previously described. Borrowing from a physiological register also appears in Cleland's depictions of ejaculation. A later episode involves Fanny's "whole spirits of life and sensation, rushing impetuously to the cock-pit... and clustering to a point there" as her gallant "spouted" into her "a potent overflow of the balsamic injection."¹¹⁰ Again, spirits and injections are employed, but the ejaculate is described as balsamic. Elsewhere Fanny relates a man's "oily balsamic injection mixing deliciously with the sluices in flow from me."¹¹¹ Boerhaave had likewise defined semen as a "thick balsamick Humour."¹¹² One explanation for *Fanny Hill*'s debt to medical and anatomical discussions is that Cleland had an active interest in those disciplines. But his interest was part of a greater movement, wherein literary authors generally referred to physiological ideas to explore sexual and sensible bodies.

This erotic syringe trope made another notable appearance in a novel that Cleland deemed as bawdy that "gives no sensations"—Sterne's *The Life and Opinions of Tristram Shandy, Gentleman*.¹¹³ Sterne leveled many satirical pokes at medicine, anatomy,

¹⁰⁸ John Cleland, *Fanny Hill; or Memoirs of a Woman of Pleasure*, ed. Peter Wagner (London: Penguin, 2001 [orig. 1748-9]), 161.

¹⁰⁹ *Ibid.*, 199-200.

¹¹⁰ *Ibid.*, 189.

¹¹¹ *Ibid.*, 120.

¹¹² Boerhaave, *Academical Lectures*, 5: 70. The use of "balsamic" in reference to semen began in the seventeenth century and evokes associations with plant resins, healing powers, preservatives, medical ointments, and the physiological ideas of Paracelsus. See OED.

¹¹³ Arthur Cash, *Laurence Sterne: The Later Years* (London: Routledge, 1992), 92.

physiology, mechanical philosophy, and especially in reference to (man-) midwifery. Early in the novel while Tristram is still being birthed, the obstetrical theme widens to include a short argument about baptismal squirts.¹¹⁴ Squirts were used for cases “in which a mother cannot deliver her child, and in which the child is held in its mother’s womb in such a way that it cannot make any part of its body appear, which... would be a case, according to the Rituals, to baptize it.”¹¹⁵ This religious interference in obstetrical matters, especially while wielding an injecting tool, corresponds to the “parallel between the conduct of male accoucheurs and that of the Catholic clergy,” which historian A. D. Harvey has observed.¹¹⁶ Sterne continued mocking these squirt baptisms by asking “whether, after the ceremony of marriage, and before that of consummation, the baptizing all the HOMUNCULI at once, slap-dash, by *injection*, would not be a shorter and safer cut still.”¹¹⁷ This procedure, he suggested, would be done “*par le moyen d’une petite canulle, and, sans faire aucun tort a le pere.*”¹¹⁸ As in much of *Tristram Shandy*, theories of generation, male sexuality, and the physiology of sensibility are the backdrop to this segment about squirts. With a wink and a nod, Sterne introduced syringes and allowed their many meanings—medical, mechanical, sexual, and sensible—to dawn on the knowing reader.

Automata and Wombs

The decline in humoralism coincided with a rise in iatromechanism. This change involved new physiological models, medical practices, and anatomical demonstrations. Taken to its fullest extent, this materialist approach isolated body parts, reduced body functions to mechanics, and diminished the metaphysical role of the mind and will. That reductionism was most apparent in the idea of automata. However, until the late eighteenth century, the retention of animal spirits in this mechanical paradigm safeguarded against total materialist reductionism—the spirits kept the influence of the mind, soul, and will in play.¹¹⁹ Of all facets of generation, the womb was subjected to the greatest degree of mechanical scrutiny, partly because of the added attention by and mechanical ideology of man-midwives. Equipped with mechanical knowledge, practices, and tools, man-midwives could

¹¹⁴ In the seventeenth century, “squirt” and “syringe” were interchangeable terms. However, “squirt” increasingly referred specifically to the religious tool.

¹¹⁵ Laurence Sterne, *The Life and Opinions of Tristram Shandy, Gentleman. The Florida Edition of the Works of Laurence Sterne*, ed. M. New and J. New (Gainesville: University Press of Florida, 1978 [orig. 1759-67]), 3: 103. Quoting a translation of “Memoire” by James A. Work.

¹¹⁶ A. D. Harvey, *Sex in Georgian England: Attitudes and Prejudices from the 1720s to the 1820s* (London: Phoenix Press, 2001), 56.

¹¹⁷ Sterne, *Tristram Shandy*, 1: 69-70.

¹¹⁸ *Ibid.*, 70. Translated as “by means of a little injection-pipe, and, without doing any harm to the father.” Sterne, *Tristram Shandy*, 3: 106.

¹¹⁹ For the changing political meanings of automata in the Romantic period, see John Tresch, “The Machine Awakens: The Science and Politics of the Fantastic Automaton,” *French Historical Studies* 34, no. 1 (2011): 87-123.

enter and control the birthing room.¹²⁰ Within mechanical contexts, polite society accepted representations of female genitalia in displays and demonstrations. As long as these mechanical descriptions of female organs of generation retained the ideas of sense, sympathy, and affectation through animal spirits and nerves, they remained within the parameters of the culture of sensibility. To retain those qualities, mechanical descriptions and models of wombs often included fluids, which signified the presence of animal spirits in the living example.

Throughout the seventeenth and eighteenth centuries, physiology increasingly involved quantitative experiments, displays, and descriptions of particular body parts, all of which evoked mechanics. Eighteenth-century anatomists and physicians considered machine models of the body as a modern medical revolution.¹²¹ As a virtuoso of mechanical inventions, Robert Boyle and his work struck the imaginations of anatomists, like Boerhaave, as profoundly as any other kind of natural philosopher.¹²² Wilson observes that, in support of Willis, the philosopher and theologian Henry Layton claimed that people are more than machines as “they have sense and reason.”¹²³ Yet some, like La Mettrie, plainly stated that “The human body is a machine that winds up its own springs.”¹²⁴ Most people, including physiologists and natural philosophers, stopped short of purely materialist and mechanical accounts of humans. By the mid-eighteenth century Jenty could reflect on the profound impact mechanics had on understanding the body, drawing a comparison with technical achievements in linguistics and navigation: “It is universally acknowledged, that a true mechanical Representation of the human Machine, as well as a Description of it, is as useful as a Lexicon, or geographical Map, to the learned World.”¹²⁵

Physicians, in particular, embraced this mechanical paradigm for its prescriptive power. They explained their advice and remedies as if mechanics estimating how best to fix a broken clock or pump. One example of this prescriptive practice comes from the anonymous physician-author of the early eighteenth-century *The Ladies Physical Directory*. Following some dietary advice, the author explained how a light supper “replenishes the Blood and Juices with nutritive Parts, increases the Spirits, and apparently invigorates the whole human System; whereas a large Meal over-powers the digestive Faculty, lays a Clog

¹²⁰ See Wilson, *Making of Man-Midwifery*, 56-7.

¹²¹ Pierre Dionis, *A General Treatise on Midwifery...* (London: A. Bell et al., 1719), preface: v.

¹²² Boerhaave, *Academical Lectures*, 5: 400. Robert Boyle, *A Free Enquiry into the Vulgarly Received Notion of Nature* (London, 1686), 305: “These living Automata, Human bodies.” This reference from Boyle is used in the OED’s definition of “automaton.”

¹²³ Catherine Wilson, *Epicureanism at the Origins of Modernity* (Oxford: Clarendon Press, 2008), 150.

¹²⁴ La Mettrie, *Man a Machine*, 11.

¹²⁵ Charles Nicholas Jenty, *An Essay on the Demonstration of the Human Structure* (London, 1757), 6.

upon all the Wheels and Springs of the Animal Machine.”¹²⁶ Another such impediment in the human machine was too much alcohol: “As to Wine, a Glass or two to promote Mirth and raise the Spirits may be very proper, but too much, instead of raising, will dissipate, and in some Degree extinguish the Spirits, and enervate the Animal Powers.”¹²⁷ Notably, this prescription snippet has animal spirits as integral to the human machine paradigm. Likewise one periodical entry from *The Guardian* in 1714 scathingly described how some “*Free Thinkers*” would have humans “be considered as *Automata*, made up of Bones and Muscles, Nerves, Arteries and Animal Spirits.”¹²⁸ Living automata, whether entire bodies or just body parts, were wholly mechanical aside from the presence and animating force of animal spirits.

But some entertained notions of the animal spirits and soul not being within the human machine, suggesting that humans were no more than the sum of their material parts—true automata.¹²⁹ Boerhaave described the automaton as follows:

An Automaton is a Machine that performs various Motions without any other Cause than the Mechanism of its own Parts within itself; which, when once put in Motion, continue so, from the same Cause. Thus a Watch is an Automaton, which, whilst in Order, moves round its Hands by the determinate Motion of its internal Parts. By an automatic Motion, or Impulse, we therefore understand that Motion which results from the mechanical Structure of the human Body, which we can neither produce nor destroy by the Influence of the Mind or Will.”¹³⁰

Boerhaave’s description highlights key aspects of discussions about automata: the significant association with watches and clocks;¹³¹ the idea of automatic motion; and the loss of volition.¹³²

The body as automaton idea raised philosophical and theological questions about the will as an extension of a divine, immaterial soul.¹³³ Excluding a spiritual soul from regularly participating in human affairs did not sit well with many, especially the increasingly influential Methodists, who professed personal and quotidian relationships with God.

¹²⁶ Physician [pseud.], *The Ladies Physical Directory...*, 8th ed. (London, 1739), 56.

¹²⁷ *Ibid.*

¹²⁸ D. Bartlett, *The Guardian* 2, no. 130 (London: J. Tonson, 1714), 174.

¹²⁹ For a brief discussion of seventeenth-century “zoomorphic automata,” see Wilson, *Epicureanism at Modernity*, 23.

¹³⁰ Boerhaave, *Academical Lectures*, 1: 7.

¹³¹ *Ibid.*, 310. Some even translated the Greek original of “automaton” as “clock.” See La Mettrie, *Man a Machine*, 66.

¹³² Boyle gave special consideration to the notion of automata. See Robert Boyle, *The Works of the Honourable Robert Boyle* (London, 1772), 3: 48.

¹³³ Some writers began advocating natural philosophical accounts that fit automata into various theological models about God’s interventions in nature. For instance, Edward Baynard gave the following cosmological description: “And her I’d ask, what human Tongue / Can praise enough that wond’rous One, / That made this great *Automaton*?” *Health, a Poem*, 3rd ed. (London, 1724), 29. This poem went into at least seven editions.

William Cullen argued “that the seeming automaton in a living animal must depend upon a soul animating all its motions;”¹³⁴ therefore, a living animal is not truly an automaton. Medical authors also censured mechanical, materialist theories. Marmaduke Berdoe criticized Boerhaave for training his students to consider “the animal œconomy under no other point of view than as a mechanical automaton, or an acrimonious mass of fluids.”¹³⁵ Perhaps Berdoe overlooked Boerhaave’s statement that “The human Body therefore is not merely an hydraulic Machine.”¹³⁶ Or, perhaps Berdoe had an impression common to other readers—that Boerhaave was undecided as to the extent that humans were machines, although they were certainly machine-like.

In distinguishing the extent to which humans were like automata, Boerhaave reasoned:

Man is no more than a mere Machine during a considerable portion of his Life, namely, in the time of Sleep, at which time the animal Part is dead, and the former vital Machine only continues to act; but if that also ceases, a fatal Sleep ensues, from which we never awake, namely, perfect Death itself.¹³⁷

When one is unconscious, the animal spirits are no longer directed by the mind. Boerhaave further qualified that some parts of the body are never subject to the will.¹³⁸ One example he proposed was the womb: “The Motions of the Internal Orifice, or Mouth of the Womb, are purely *mechanical* or *involuntary*; for did they depend upon the Will, some Women would direct it to Motions diametrically opposite to those it makes.”¹³⁹ This instance of “*mechanical* or *involuntary*” motion is a pointed one: a woman trying to open or close the internal orifice of her womb wants agency over generation. Procreative physiological functions were often involuntary motions. In her midwifery manual, Jane Sharp suggested that “when the Yard casts the Seed into the Womb, the neck of the Womb with her own slanting fibres lays hold of it and embraceth it, and by this circle the Seed is kept in the

¹³⁴ William Cullen, *Lectures on the Materia Medica* (London, 1773), 4.

¹³⁵ Marmaduke Berdoe, *An Essay on the Nature and Causes of the Gout, with a few Conjectures on the Probability of its Cure* (Bath, 1771), 20.

¹³⁶ Boerhaave, *Academical Lectures*, 5: 347.

¹³⁷ *Ibid.*, 4: 281. See La Mettrie, *Man a Machine*, 9: “The body and soul seem to fall asleep together.”

¹³⁸ *Ibid.*, 1: 8. “Nor is the Mind able to suppress these automatic Endeavours of our Machines for Self-preservation.”

¹³⁹ *Ibid.*, 46. See Allison Muri, *The Enlightenment Cyborg: A History of Communications and Control in the Human Machine, 1660-1830* (Toronto: University of Toronto Press, 2007). Muri suggests that “what we find is that the eighteenth-century woman was rarely characterized directly as a machine, although her automatic womb was featured as a distinct mechanism within which the fetus was a passenger” (198). As an example of Muri’s comment, Dionis argued that the “Motions of the Internal Orifice, or Mouth of the Womb, are purely *mechanical* or *involuntary*.” *Treatise of Midwifery*, 46.

Womb, that it cannot fly out again.”¹⁴⁰ John Maubray’s midwifery text explicitly described how “the Womb only *acts of itself*, and *operates* by Virtue of its own *Active Faculties*.”¹⁴¹ He further described that the “*Actions of the Womb*” were the chief causes for “the *Constitution of the Human Conception*.”¹⁴² These spontaneous womb actions had profound consequences on female constitutions and, if pregnant, the fetus. Those actions also laid beyond women’s mental control, suggesting that the womb acted of its own accord.

Another noted instance of the womb acting autonomously was during parturition. Willis observed, “Sometimes it also happens, that Convulsive Symptoms are induced in Child-bearing Women, by reason of some hurt or evil brought to the Womb.”¹⁴³ Not only were contractions involuntary movements of the womb, they could be induced by others, such as practitioners.

Harvie relates, That wonderful Convulsions were caused by the injection of some sharp thing into the Womb: So sometimes, though rarely it happens, that a Morbific Matter, or Explosive *Copula* is fixed to the Spirits dwelling about the Extremities of the Nerves, and near the Womb, immediately, from the place there Affected, and without fault of the Brain.¹⁴⁴

These observations emphasized the womb’s nervous sensitivity, and how involuntary motions could be initiated by a practitioner’s intervention. Wombs, like sensible bodies generally, responded spontaneously to external stimuli, such as a practitioner’s instrument or a male member. That certain obstetrical manipulations effected specific responses through the motions and qualities of fluid animal spirits again related to an automaton that worked within regular mechanical laws and could be adjusted by any one of many different operators.

The perception of the womb as an automaton within the body followed on from early modern notions of the womb as self-living.¹⁴⁵ Like Willis, Boerhaave recounted Harvey’s ideas about spontaneous womb movements:

¹⁴⁰ Jane Sharp, *The Compleat Midwife’s Companion...* (London: 1725), 29. According to *The Ladies Dispensatory: or, Every Women Her Own Physician...*, 2nd ed. (London, 1740), 107, a notable uterine disorder related to hysteria was *furor uterinus*, defined as a causative condition wherein the female was “involuntarily excited, as it were, to venereal Embraces.” Jean Baptiste van Helmont supposed that the “exorbitant” womb’s “phansie and magical appetite” caused its “natural oestrum or libidinous fury.” *A Ternary of Paradoxes*, trans. Walter Charleton (London, 1650), 65.

¹⁴¹ John Maubray, *The Female Physician...* (London, 1724), 197.

¹⁴² *Ibid.*

¹⁴³ Willis, “Of Convulsive Diseases,” in *Dr. Willis’s Practice*, 73.

¹⁴⁴ *Ibid.*

¹⁴⁵ See Darren Wagner, “Visualizations of the Womb through Tropes, Dissection, and Illustration, circa 1660-1774,” in *Illustration in the Long Eighteenth Century: Reconfiguring the Visual Periphery of the Text*, ed. Christina Ionescu (Newcastle: Cambridge Scholars Publishing, 2011), 563-6.

The celebrated *Harvey*, whose Name must be always mentioned with Esteem, writes, that the Uterus contains in itself a Power of expelling the Fœtus, and that this Power is so considerable, that the Child has been found betwixt the Thighs of its dead Mother, by the Expulsion of the Uterus after her decease.¹⁴⁶

The womb continued to have an independent and vital force. A translation of Nicolas Venette's erotic medical treatise *Conjugal Love Revealed* (1720) relayed this notion that the womb "is an Animal."¹⁴⁷ He described how the womb "is extraordinarily moved when it passionately loves or hates any thing. Its Instinct is surprizing, when it approaches a Man's Member in order to draw from it wherewith to moisten, and procure it self pleasure." Venette even attributed passions, instincts, and desires to the womb.

However, in the late seventeenth and early eighteenth centuries, likening wombs to animals was displaced by likening wombs to machines. Anatomists like Diemerbroeck debunked medical ideas of an animalistic womb. He was vexed as to how

any one will be so obstinate as to believe that the womb is alive after the Decease of the woman, and is mov'd of it self by its own proper Power, of necessity with *Plato* he will split upon a most hard Rock of Absurdity, while he concludes that the womb is a Creature of it self, not living a Life common to the rest of the Body; and hence it will follow that one Creature is composed of two, or that one Creature is the perfecting part of the other.¹⁴⁸

Having two separate creatures or beings in one was absurd. But having an isolated mechanism within a larger machine was common. The Dutch physician and midwifery author Henrick van Deventer expounded how God, the Mechanic, contrived humans to be comprised of "the most necessary Machines, the least liable to Accidents and Errour, but not to be eternal."¹⁴⁹ This principle was particularly manifest in the machinery of generation: "Hence it is that the Rearing of a Child in the Womb, and its passage into the World, are the best secured against, and are the least liable to Chances of miscarrying in their Work."¹⁵⁰ Yet, in line with earlier animal analogies, Deventer also suggested that the womb had the power "to transform itself."¹⁵¹ Whereas early modern authors construed wombs as defying personal and medical control, the new, modern mechanical physicians could measure and control its parameters. In essence, the womb changed from "like an Animal in an Animal"¹⁵²

¹⁴⁶ Boerhaave, *Academical Lectures*, 5: 103.

¹⁴⁷ Nicolas Venette, *Conjugal Love Revealed*..., 7th ed. (London, 1720), 28-9.

¹⁴⁸ Diemerbroeck, *Anatomy of Human Bodies*, 174.

¹⁴⁹ Hendrik van Deventer, *The Art of Midwifery Improv'd* (London, 1716), introduction.

¹⁵⁰ *Ibid.*

¹⁵¹ Boerhaave, *Academical Lectures*, 5: 104.

¹⁵² *Ibid.*

to a machine within a machine.¹⁵³ This change in perception corresponded to seventeenth- and eighteenth-century discussions and representations of animals as machines.¹⁵⁴ With this change came the loss of certain qualities: it roamed less, it released fewer vapours, and the fury of its dispositions quietened. But, female sex organs still sucked, grasped, dilated, contracted, felt, and desired.

These early eighteenth-century medical portrayals of mechanical wombs were adopted into bawdy literature. The 1723 collection of lewd poems *Pleasure for a Minute*, for example, included the sonnet “*The Water-Engine*.”

A Female Engine 'tis, you'll say,
That I thus lively here display;
All other Engines it exceeds,
It does those mighty wond'rous Deeds;
It's Water, mix'd, is of such worth,
It procreates, and Man brings forth:
But when you well this Engine try,
It draws the Lover's Water dry;
It has a Well that ne'er has been
Home-fathom'd, yet all venture in;
Tho' sometimes this will burn like Flame,
When in the Hands of vicious Dame:
It is the Mover of Desire,
First kindles, then puts out Love's Fire.¹⁵⁵

Although “engine” did not necessarily refer to mechanical devices, this poem’s styling of female genitalia as an engine evokes a pump image. This metaphor also conveys the sense of sex organs as self-moving and as the origin of desire. Like the animal qualities Pierre Dionis had attributed to the womb, Cleland described how Fanny’s genitalia *made* her “exert all those springs of the compressive exsuction, with which the sensitive mechanism of that part thirstily draws and drains the nipple of love.”¹⁵⁶ Although Cleland used mechanical terms, the nervous sensitivity of female genitalia preserved its involuntary and lustful motions.¹⁵⁷ The same principles apply also to males in *Fanny Hill*. “For now the man-machine, strongly worked upon by the sensual passion, felt so manfully his advantages and superiority, felt

¹⁵³ John Stedman, *Physiological Essays and Observations* (Edinburgh, 1769), 65-7.

¹⁵⁴ See Wilson, *Epicureanism at Modernity*, 156. Wilson particularly highlights René Descartes as explaining how animals “were mere machines.”

¹⁵⁵ *Pleasure for a Minute, or the Amorous Adventure* (London: A. Dodd, 1730), 20-1. For discussion of this poem and its mechanical trope, see Muri, *Cyborg*, 200.

¹⁵⁶ Cleland, *Fanny Hill*, 221.

¹⁵⁷ For discussion of Fanny Hill and machine-genital trope, see Muri, *Cyborg*, 195-98.

withal the sting of pleasure so intolerable that, maddening with it, his joys began to assume a character of furiousness”¹⁵⁸ The “man-machine,” although mechanical, is susceptible to the measurable forces that sexual stimulation exert on the body and mind. Fanny also experiences sex in this way, as spirits and nerves “make me sensible of the pleasuring stretch of those nether lips, from the in-driving machine.”¹⁵⁹ In mid-century erotic literature, as in medical, both male and female genitalia were described as machines that were sensitive, autonomous, and influential. Such mechanical metaphors also referred to specific machines and devices.

In particular, mechanical discussions about the womb invited comparisons with one of the most impressive kinds of eighteenth-century machines—the clock. In the opinion of the esteemed accoucheur Dionis, when the womb is “ill or well, all the Body is sensible of it; wherefore it is called the Clock, which, shews the bad or good state of Health in Women.”¹⁶⁰ Boerhaave was perhaps the most impressed by the regularity of menstruation: “There are some Women who have their Menses return in such exact Periods, that they can tell the Hour.”¹⁶¹ Physicians were not the only ones to describe this uterine timekeeping. A dirty song that touched on this theme, and which rode the coattails of Sterne’s *Tristram Shandy*, advised “maidens and madams, whose fancies are itching,” to satisfy their sexual desires and “Read the life and opinions of *Tristram Shandy*, / You’ll move like *clock-work* as true as can be.”¹⁶² Male genitalia shared in these clockwork representations. In the same volume, a ballad entitled “The Female Barbers: A Tale” tells of a group of women who competed for the fullest escutcheon. The losers, being poor sports, forcefully shaved the pubic hair of the winner. The newly shorn victor feared her husband’s reprimand. However, the husband takes no notice for another twelve days, because “Whether, adopting *Shandy*’s notions, / The clock directed all his motions.”¹⁶³ Following from Sterne’s connection of mechanical philosophy to Mr. and Mrs. Shandy’s sexual appetite, clock metaphors affirmed—for both sexes—that genitals kept their own motion and ran to their own rhythm.

Animal spirits enabled the womb to affect its own self-motion and provided for its own life force, or *vis vitae*.¹⁶⁴ The womb, like the brain, was exceedingly sensitive to motions of the spirits. The most poignant example of this sensitivity was smell. When Boerhaave explained the interrelation between mechanics and sensibility he suggested that “there is internally concealed a mere spirituous or nervous Man which governs the whole

¹⁵⁸ Cleland, *Fanny Hill*, 200.

¹⁵⁹ *Ibid.*, 205.

¹⁶⁰ Dionis, *Treatise of Midwifery*, 35.

¹⁶¹ Boerhaave, *Academical Lectures*, 5: 113.

¹⁶² “The old famous Kittlebender Ballad paraphrased,” in *The Cure for the Spleen...* (Newcastle, 1769), 14-5.

¹⁶³ “The Female Barbers: A Tale,” in *Cure for the Spleen...* (Newcastle, 1769), 114.

¹⁶⁴ Boerhaave, *Academical Lectures*, 5: 345.

Machine; so that we need not wonder that a Motion in one Nerve should excite a Motion in the rest.”¹⁶⁵ His example of this “mere spirituous or nervous Man” was in relation to smells. There have been instances, he recalled, where “People have been killed by being shut up with Apples, others by smelling at Roses.”¹⁶⁶ But, as mentioned, smelling was not exclusively the province of the nose. Diemerbroeck explained that “stinking Smells” could induce hysteria while “sweet Smells” relieved such womb maladies.¹⁶⁷ This phenomenon followed from the womb’s varied reception to smells. A sweet smell presented to the nose would cause the womb to ascend, causing a hysterical fit. However, a sweet smell placed on the “inside of the Privity” encouraged the womb to descend, abating the hysteria.¹⁶⁸ This older notion was advanced by Valentin Andreas Moellenbrock in his treatise on scurvy grass, *Cochlearia Curiosa* (1676), wherein he suggested that some “Medicines are not only ungrateful to the taste, but stinking sented too... and yet by mutual assent of all authentick Physitians, they are hurtful to the Head, Womb, and Nerves.”¹⁶⁹ As Mark Jenner notes, “Women, particularly their wombs, were held to be particularly sensitive to odours.”¹⁷⁰ This sexual and physiological perception was part of the understanding of “smells as having considerable, and often dangerous, effects upon the body.”¹⁷¹ Smell, as a sign of sensitivity, was also used in literary portrayals of sensible individuals and female susceptibility.

In *The Expedition of Humphry Clinker* (1771), Tobias Smollett’s depiction of Matthew Bramble is exactly reminiscent of Boerhaave’s description of a “spirituous or nervous Man.” As in Moellenbrock’s smell discussion, Bramble suggests that a “stink, or stench, meant no more than a strong impression on the olfactory nerves.”¹⁷² With this consideration in mind, an episode occurs in a fashionable public house in Bath involving Bramble’s romantically inclined niece, Lydia. Upon entering the public house, Lydia fell feverish with a headache because the “place was so hot, and the smell so different from what

¹⁶⁵ Ibid., 49.

¹⁶⁶ Ibid.

¹⁶⁷ John Pechey, *A General Treatise of the Diseases of Maids, Bigbellied Women, Child-Bed-Women, and Widows* (London, 1696), 155, affirmed the prevalence of this smell-womb relationship by relating that there are “Certain perfumes, whereby the Womb is allured upwards,” which could cause a complicated birth or hinder the delivery of the placenta.

¹⁶⁸ Diemerbroeck, *Anatomy of Human Bodies*, 171.

¹⁶⁹ Valentin Andreas Moellenbrock, *Cochlearia Curiosa: or the Curiosities of Scurvygrass...*, trans. Thomas Sherley (London: printed by S. and B. Griffin, for William Cademan, 1676), 117.

¹⁷⁰ Mark Jenner, “Civilization and Deodorization? Smell in Early Modern English Culture,” in *Civil Histories: Essays Presented to Sir Keith Thomas*, ed. Peter Burke, 127-44 (Oxford: Oxford University Press, 2000), 132.

¹⁷¹ Mark Jenner, “Follow Your Nose? Smell, Smelling, and Their Histories,” *American Historical Review* 116, no. 2 (2011), 346. Jenner provides an insightful and comprehensive account of the historiography of smells.

¹⁷² Tobias Smollett, *The Expedition of Humphry Clinker* (Oxford: Oxford University Press, 1998 [orig. 1771]), 18.

we are used to.”¹⁷³ The remedy for such a swoon as Lydia’s was, like the remedy for hysteria, through more smells:

When a Person is in a *Delirium*, or Swoon, the Physician cannot recall the Mind, which has no relation to his Business; but by applying Vinegar, or other Volatiles to the Nose, he can restore the sick Machine to its former Motions, and then the Mind will also exhibit its former Actions, and this full as well as if he understood the manner of Connexion between the Actions of the Body and those of the conscious Mind.¹⁷⁴

Smells had a unique influence over the exceptionally sensitive parts of the human machine, whether that was the brain or the womb.

Mechanical physiology reinforced the regular and readable set of motions in the body—gestures and signs—used throughout the culture of sensibility. Boerhaave noted that many of the machine-like changes in the human body, such as “the Motion of our Fluids thro’ their Vessels,” go unnoticed by human observation.¹⁷⁵ In these cases, it was the physician’s role to read observable signs resulting from internal mechanical changes. These signs were well established in medicine: “The State of the Pulse, and Respiration, the Colour, Heat, Tension, and Moisture of the Skin, the Brightness of the Eyes, &c.”¹⁷⁶ Such physical cues are the very same as those used in literary portrayals of sensible and sexual bodies.¹⁷⁷ These signs were also used in midwifery. Man-midwives, in particular, perceived touching as both reliant on fine senses and involving a set of mechanical changes. As such, William Smellie’s *Course of Lectures upon Midwifery* (1742) detailed the use of his obstetrical manikin or phantom for showing the skeletal structure of the pelvis, the anatomical parts of the organs of generation, and for practicing the “Method of Touching” and delivery.¹⁷⁸

Yet, the growing use of obstetrical tools and interest in statistical measurements of pelvises, uteruses, and other reproductive parts reinforced conceptualizations of female reproductive organs as mechanical, which threatened the importance of sensitive touch. In the introduction to his *A Compendium of Midwifery* (1766), Thomas Cooper commented on this application of mechanics to midwifery. He concluded that “Statics is the Branch of this Science, which has the nearest Analogy with the Study of Midwifery, and the Lever, the only adventitious Member required, to assist the Operations of the animal Machine, in the

¹⁷³ *Ibid.*, 41.

¹⁷⁴ Boerhaave, *Academical Lectures*, 1: 70.

¹⁷⁵ *Ibid.*, 58.

¹⁷⁶ *Ibid.*

¹⁷⁷ See chapter four for a fuller discussion of reading pathologies.

¹⁷⁸ William Smellie, [*A Course of Lectures upon Midwifery*... (London?, 1742), 4.

Act of Parturition.”¹⁷⁹ In this instance, the application of mechanical tools such as forceps to delivery corresponded to a perception of the body—especially the labouring womb—as mechanical. Cooper, like many of his colleagues, understood the “admirable Phenomenon” of parturition within mechanical terms.¹⁸⁰ The array of eighteenth-century mechanical obstetrical tools had bloomed by mid-century, with many practitioners trying to cram their own speciality instruments into the midwifery market (fig. 2.12).¹⁸¹ John Leake’s course on midwifery included a lecture specifically on difficult labours. This lecture featured “shewing the Method of applying the *Forceps* and other Kinds of *Instruments*, in several Positions of the *Childs Head*” and how to use “the *Terebra Occulta*, *Long Scissars*, and *Scalpel Ring*;... [the] *Tire-tête* or *Crotchet*”¹⁸² (fig. 2.13). Mechanical instruments, as many historians have noted, epitomized the materialist reduction of female reproduction.¹⁸³ This materialist reduction provided man-midwives, surgeons, and physicians the authority to speak about and attend to female organs of generation.¹⁸⁴ That reductionism cast the sensitivity of male practitioners and female reproductive bodies into question.

Because of this dependency, mechanical objects and language became strongly linked with their vocations, which both became a point of pride and a target for criticism. In a tract considering the pros and cons of man-midwives, Louis Lapeyre criticized “that a surgeon employed in the exercise of his art, is no more than a thinking machine actually at work, and entirely occupied with the thoughts of conducting the operation he is employed about.”¹⁸⁵ Although disparaging of such mechanical operators, Lapeyre concluded that man-midwives filled a necessary and beneficial role. But, not everyone agreed. The French-trained midwife, Elizabeth Nihell, vehemently argued against accoucheurs. She derided those male practitioners as full of inapplicable knowledge; yet, she still allowed that a midwife should know “the structure and mechanical disposition of the internal parts which more particularly distinguish her sex.”¹⁸⁶ Although strongly associated with modern, male-dominated medicine, mechanics became ingrained into perceptions of female reproduction.

¹⁷⁹ Thomas Cooper, *A Compendium of Midwifery...* (London, 1766), 6-7.

¹⁸⁰ Muri, *Cyborg*, 202, described a shift to descriptions of the womb as more passive and the fetus as self-moving in parturition.

¹⁸¹ See Wilson, *Making Man-Midwifery*, 65-103.

¹⁸² John Leake, “A Course of Lectures on the Theory and Practice of Midwifery” (London, 1767), 12.

¹⁸³ Historians such as Allison Muri, Lianne McTavish, and Lisa Forman Cody have highlighted such reductionist perspectives of female bodies.

¹⁸⁴ See Muri, *Enlightenment Cyborg*, 219-224.

¹⁸⁵ Louis Lapeyre, *An Enquiry into the Merits of These Two Important Questions: I. Whether Women with Child Ought to Prefer the Assistance of Their Own Sex to that of Men-Midwives? II. Whether the Assistance of Men-Midwives is Contrary to Decency...* (London, 1772), 58.

¹⁸⁶ Elizabeth Nihell, *A Treatise on the Art of Midwifery* (London, 1760), 32-3.

This mechanical envisioning of the womb culminated in the production of obstetrical manikins or phantoms used by lecturing man-midwives. Dissections and wax models of female reproductive organs had engendered a particular fascination to European audiences well before and into the eighteenth century (fig. 2.14 a/b).¹⁸⁷ However, the production and use of manikins correspondingly grew with new mechanical perspectives on female reproduction. While individuals like La Mettrie proposed that humans were machines, these manikins suggested the reverse: that machines could stand-in for humans. Manikins became a fashionable obstetrical teaching accessory around mid-century, at the height of the struggles between midwives and man-midwives.¹⁸⁸ At the core of the debates about manikins was sensibility, particularly about whether man-midwives' mechanical approach to women's reproductive bodies excluded sensible touch, and whether mechanical models of female organs of generation adequately represented those parts' sensibility.

Yet, manikins became major assets for those attempting commercial teaching in midwifery. For example, in his "An Abstract of Midwifery for the Use of the Lying-In Infirmary" (1744), Sir Richard Manningham promoted his course of obstetrical lectures as follows:

With due Explanations by *Anatomical Preparations, &c.* The *repeated* Performances of all Kinds of *Deliveries*, on our great *Machine*, with the *Ocular* Demonstration of the *Reason* and *Justness* of the *Rules* to be observed in all *genuine* and true Labours, in the *Lying-in Infirmary*, on our *Glass Machine*, makes a complete Method of teaching *Midwifery*.¹⁸⁹

¹⁸⁷ In relating the history of dissecting female bodies, Ferrari, "Public Anatomy" (54) described how the "statutes from 1405 set 'the maximum number of male and female anatomies (two and one respectively).'" These anatomies were "attended by students only: twenty of them or, when the subject was a woman, thirty; mostly chosen from among the foreign scholars" (54). Hansen in "Resurrecting Death" (671-2) specified that "Records show that dissections of female bodies were particularly popular, especially if they were pregnant." For the history of wax anatomical models, particularly in Italy, see Lucia Dacome, "Women, Wax and Anatomy in the 'Century of Things,'" in *Spaces, Objects and Identities in Early Modern Italian Medicine*, eds. Sandra Cavallo and David Gentilcore, 50-78 (Oxford: Blackwell Publishing, 2008).

¹⁸⁸ The most insightful discussion of obstetrical machines is in Pam Lieske, "'Made in Imitation of Real Women and Children': Obstetrical Machines in Eighteenth-Century Britain," in *The Female Body in Medicine and Literature*, eds. Andrew Mangham and Greta Depledge (Liverpool: University of Liverpool Press, 2011): 69-88; Sheena Sommers, "Transcending the Sexed Body: Reason, Sympathy, and 'Thinking Machines' in Debates over Male Midwifery," in *Female Body in Medicine*: 89-106.

¹⁸⁹ Richard Manningham, "An Abstract of Midwifery for the Use of the Lying-In Infirmary" (London, 1744), frontispiece. Leake also advertised his midwifery lectures as having the distinct advantage of an "*artificial Representation*" by machines "made to the most exact Imitation of *real Women* and *Children*." Leake, "Course of Lectures," frontispiece.

Manningham, like Smellie, Leake, and other midwifery lecturers, considered teaching with machines to be the greatest possible advantage.¹⁹⁰ Lecturers advertised these advantages, which included how students would “perfectly form their Hands to practise in all difficult and præternatural Labours.”¹⁹¹ These machines were as good as the real thing, without “*Risque of injuring either Mother or Child.*”¹⁹² However, critics argued that manikins did not provide students with the sensitive and knowing touch needed in obstetrical medicine.

This concern about the lack of sensitivity students acquired from training on obstetrical machines arose in discussions about a valued midwifery skill and common obstetrical lecture topic:¹⁹³ what Leake described as “*Mechanical Knowledge* apply’d to the Operation of *Turning the Child.*”¹⁹⁴ John Burton, who was lampooned in *Tristram Shandy* as the cumbersome mechanical operator, Dr Slop, vehemently criticized the inappropriate application of mechanical tools to especially tactile procedures such as “*Turning the Child*” manoeuvres.¹⁹⁵ In *A Letter to William Smellie* (1753), Burton refuted Smellie’s professed technique of using forceps to turn a child in the womb when the shoulders are stuck. Burton concluded that “Upon a Machine you may do such a Thing, but for many Reasons it cannot be effected on an human Body in Labour; the Difference betwixt these two being very great.”¹⁹⁶ Burton was partly criticizing how man-midwives engrossed themselves in mechanical approaches and partly defending his advantages as a man-midwife with a trained, sensitive, and knowing touch.

Whereas detractors raised concerns about mechanics leading to the loss of medics’ sensibility, advocates of mechanical approaches and teaching argued that manikins replicated two key sensory experiences, sight and touch. Manningham boasted that his machines offered “*ocular Demonstration*” of the interior organs of generation and allowed practice in “the Manner of Touching or Handling of Women.”¹⁹⁷ The focus on these two senses followed from midwives’ traditional skill of *touching* and anatomists’ involvement in

¹⁹⁰ The machine used by Manningham was “a Contrivance made on the Bones or *Skeleton* of a Woman, with an *artificial Matrix.*” *Ibid.*, 33. Unfortunately, his glass machine does not have a more detailed description, although a few other manikins do.

¹⁹¹ *Ibid.*, 15.

¹⁹² *Ibid.*, preface: vii.

¹⁹³ Leake warned that learning from “*Machines badly constructed...do much real Harm*, by misinforming the Judgment of the *Student*, and giving him a false Idea of Nature both in the *Touch, Figure, and Disposition* of the several Parts.” Leake, “Course of Lectures,” 2.

¹⁹⁴ *Ibid.*, 13.

¹⁹⁵ Smellie’s annotations to a copy of his *Lectures upon Midwifery* instructed how when the fetus is presented sideways to “Allways fix the Forceps on each side of the Temples or Ears better so in this Position draw upon and downwards” (16).

¹⁹⁶ John Burton, *A Letter to William Smellie...* (London: printed for W. Owen, 1753), 147. After pressing his arguments ever further, Burton re-emphasized, “*Upon a Machine this indeed may be done, but not on a Fœtus*” (148).

¹⁹⁷ Manningham, “Abstract of Midwifery,” preface: vi.

visual demonstrations in dissections. Through such practices both man-midwives and anatomists bolstered their appearance as figures of refined sensibility.

Another criticism of manikins related to the inadequate representation of female organs of generation as especially sensible parts. The inclusion of fluids in some of these mechanical imitations of wombs was intended to replicate that essential hydraulic component, which included animal spirits and nervous movement. Abraham Chovet, who made several elaborate wax models for anatomical teaching in London, created and advertised in the 1730s a model of a “pregnant woman flayed alive, in which maternal-foetal blood was shown through coloured liquids.”¹⁹⁸ At that time, medics were investigating maternal-foetal circulation as it related to the conveyance of animal spirits and the phenomenon of maternal impressions on foetuses (fig. 2.15).¹⁹⁹ Smellie also advertised fluids in his obstetrical machine: “Each Pupil on a Machine delivers a Child coming in the natural Way, inclosed in the *Uterus*, and surrounded with its Membranes and Waters.”²⁰⁰ This re-enactment mirrored the mechanical description given some years earlier by Boerhaave, when he elaborated that in parturition “the Waters of the Amnios equably distend and dilate the Os Uteri like a Bladder, so as to prove an excellent natural Machine or Instrument to forward the Birth.”²⁰¹ Such a portrayal of the mechanical utilities of the amniotic membranes and fluids essentially blueprinted the parturition features on Smellie’s manikin. But Boerhaave’s description of fluids as part of a machine “to forward the Birth” emphasizes the spontaneous quality of that hydraulic, parturition machine.

Sensibility on the part of the practitioner and the female body led to other criticisms about male obstetrical operators inciting sexual arousal through their touching female genitalia. This scathing criticism did not cause man-midwives to disappear, rather the capacity for female pleasure diminished. As Laqueur argues, and Rousseau affirms, the notion that female pleasure was essential to an act of sexual reproduction was dismissed in the mid-eighteenth century.²⁰² The date given for this shift in perceptions, however, is set a few decades too early. I have found the mechanization of male and female genitalia was not to the exclusion of pleasure—at least not initially. Rather, animal spirits were initially retained as an integral part, or force, within the womb/automaton. However, with the discredit of animal spirits came a reduction of the sensitive influences of female genitalia on the constitution and mind within these mechanical obstetric approaches. Female pleasure

¹⁹⁸ Lieske, “Obstetrical Machines,” 70.

¹⁹⁹ See the section on maternal imagination in chapter four.

²⁰⁰ Smellie, *Lectures upon Midwifery*, 5.

²⁰¹ Boerhaave, *Academical Lectures*, 5: 192.

²⁰² Thomas Laqueur, “Orgasm, Generation, and the Politics of Reproductive Biology,” *Representations* 14 (Spring 1986): 1-14; George Rousseau, “Sexual Knowledge: Panspermist Jokes, Reproductive Technologies, and Virgin Births,” in *A Cultural History of the Human Body In the Enlightenment*, ed. Carole Reeves (Oxford: Berg, 2010), 4: 54.

and the intimate connection between sight, touch, and arousal diminished as the theory of animal spirits became insupportable. This shift dulled some anxieties about the sexual implications of having man-midwives or male obstetricians since the mind was no longer influenced by the motions of spirits. Without animal spirits, the automaton-like genitalia exercised less influence over the mind and behaviours of the individual.

Conclusion

The penis/syringe and womb/automaton metaphors came about for different reasons; however, for most of the eighteenth century both metaphors corresponded to mechanical theories about generation and discussions about sensible, sexual bodies. Syringes became more than just figurative phalluses: they were adapted to be both sexual and reproductive devices. Those seeking to enhance their private pleasures could benefit from squirting dildos. In the lewd book *A New Atalantis for the Year One Thousand Seven Hundred and Fifty-Eight* such a device was acquired and used by the lascivious young maid Tonzenie, who took her sexual cues from reading “Ovid’s Art of Love, Rochester’s works, and the Memoirs of a Woman of Pleasure.”²⁰³ While Tonzenie pleased herself, her French maid, who was “well skilled in such practices, would in the moment of rapture, dart a warm injection; nay, sometimes artfully gird it to her loins, and act the man with her young mistress.”²⁰⁴ Physiological descriptions, figurative associations, and these dildos that mimicked male ejaculations foreshadowed the first documented human artificial insemination, which John Hunter designed using a syringe. A man who had a hypospadias and could not impregnate his wife was advised by Hunter to “be prepared with a syringe fitted for the purpose, previously warmed; and that, immediately after the emission had taken place, it should be taken up by the syringe, and injected into the vagina, while the female organs were still under the influence of the coitus.”²⁰⁵ This move to artificial insemination by injection was not a giant leap; preceding decades of anatomical practices, literary imagery, and erotic devices portended this mechanical replacement of a penis in experiment.

Unlike the metaphorical likening of penises to syringes, the idea of the womb as a machine continued to be employed throughout the nineteenth century. Without the inclusion of animal spirits, obstetrical manikins became even more accurate representations of a purely materialist and mechanistic female reproductive physiology. This view of the womb as an involuntary organ eventually became manifest in mid-nineteenth-century introduction of anaesthesia in obstetrical deliveries. Yet, in the early eighteenth century, anatomical and

²⁰³ *A New Atalantis, for the Year One Thousand Seven Hundred and Fifty-Eight*. 2nd ed. (London: M. Thrush, 1758), 52.

²⁰⁴ *Ibid.*, 52-3. Also referred to in Harvey, *Sex in Georgian England*, 44.

²⁰⁵ Everard Home, *An Account of the Dissection of an Hermaphrodite Dog...* (London, 1799), 8.

obstetrical activities, perspectives, and representations relating to genitalia promoted ideas of mechanism that accommodated animal spirits. Both syringes and manikins, like other mechanical instruments used by anatomists and medical practitioners, reflected narrower vocational discussions and broader cultural expectations about how bodies and sexuality worked. These mechanical ideas and approaches in the eighteenth century left an enduring impression as to how male and female genitalia function. Until the 1770s, these anatomical and obstetrical ideas corresponded with cultural portrayals of sexual organs in sensible bodies. These representations held both male and female genitalia to have exquisite feeling, degrees of autonomy from the individual's will, and a profound influence over the constitution.

Around the same time as Hunter's experiment, William Smellie (the encyclopaedist, not the man-midwife) asserted that male and female genitals without nerves and spirits "convey nothing more than the idea of an automaton, or self-moving machine."²⁰⁶ For most of the eighteenth century, animal spirits embodied the non-mechanical, non-material, and essential active elements of human generation and sexual physiology.

²⁰⁶ William Smellie, *The Philosophy of Natural History* (Dublin: W. Porter, 1790), 1: 78-9.

Figures: Chapter Two

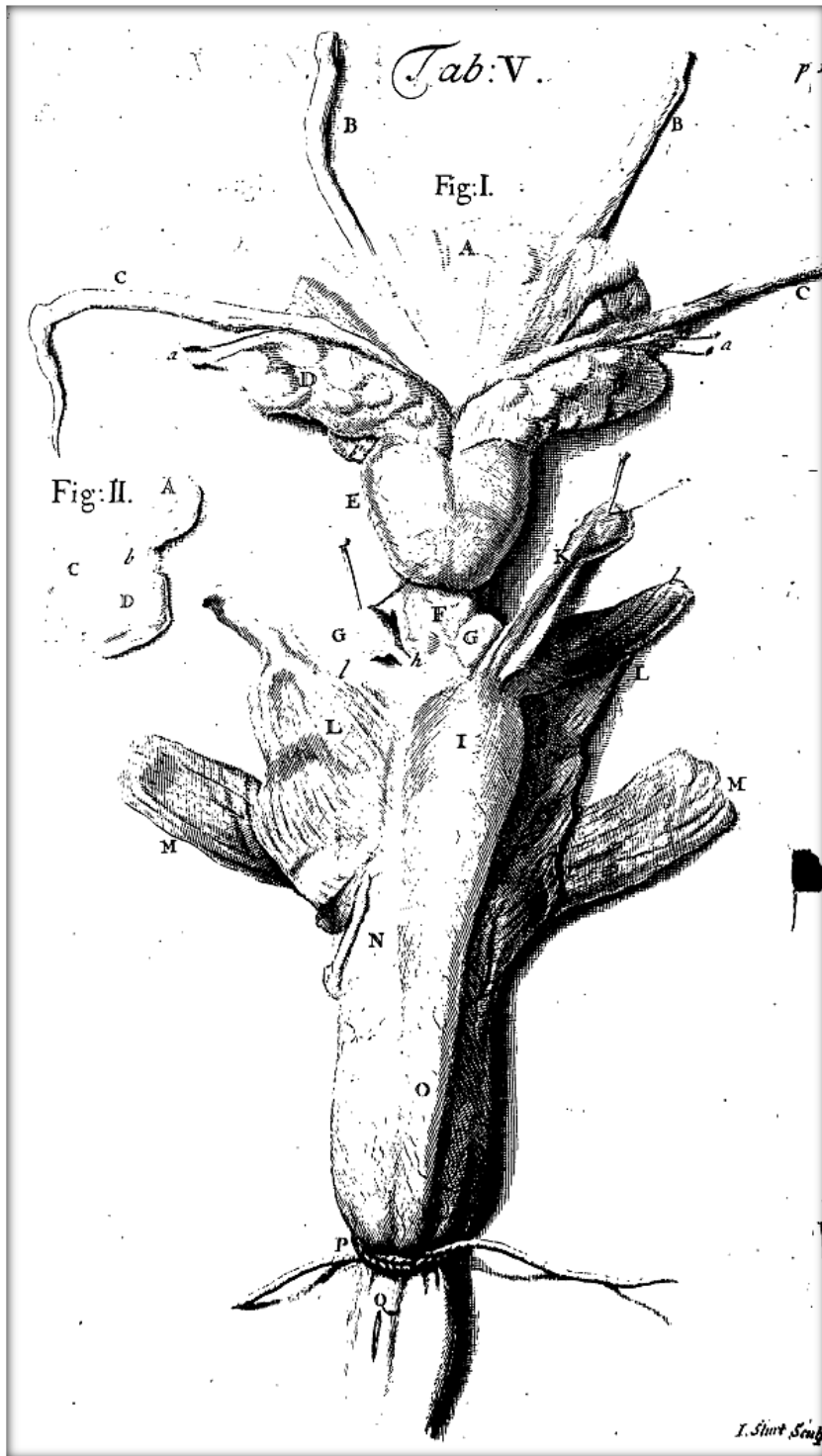


Fig. 2.1 An inflated penis from James Drake's *Anthropologia Nova...* (1717). The accompanying text describes the organ and how to inflate a penis, showing where to insert the blow pipe (Q) and where to place ligatures to capture the air (P).



Fig. 2.2 An engraving showing dissected female organs of generation with the vasculature inflated. The original version of this illustration included in Robert James' *A Medical Dictionary* (1743) is from Regnier de Graaf's *De Vivorum Organis Generationi Inservientibus de Clysteribus et de Usu Siphonis in Anatomia* (1668).

Fig. 22.

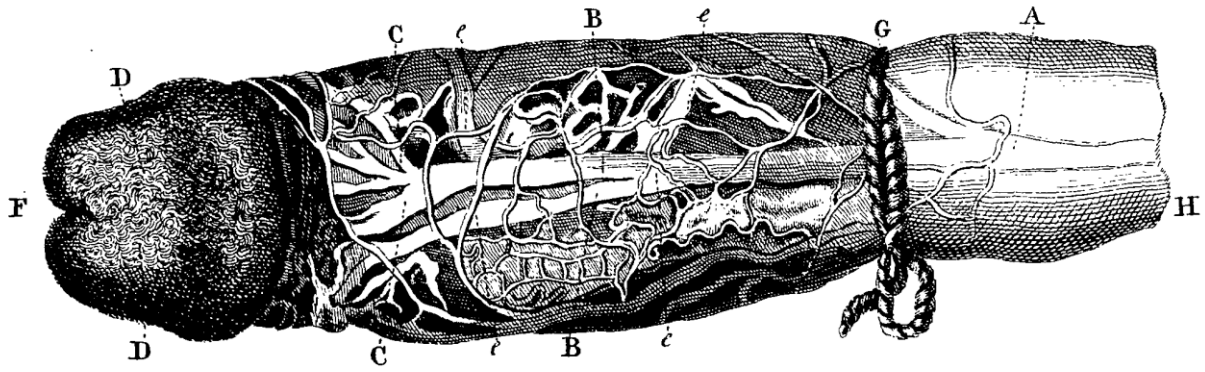


Fig. 23.

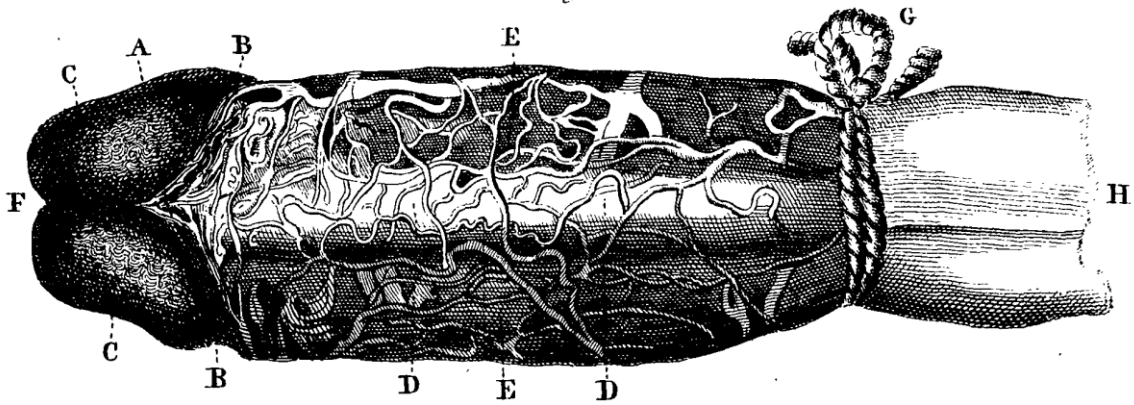


Fig. 2.3 Plate V of Lorenz Heister's *A Compendium of Anatomy...* (1752), which "Shews the human penis, on its upper part; with its veins, and the cavernous substance, injected with crude quicksilver" (476).

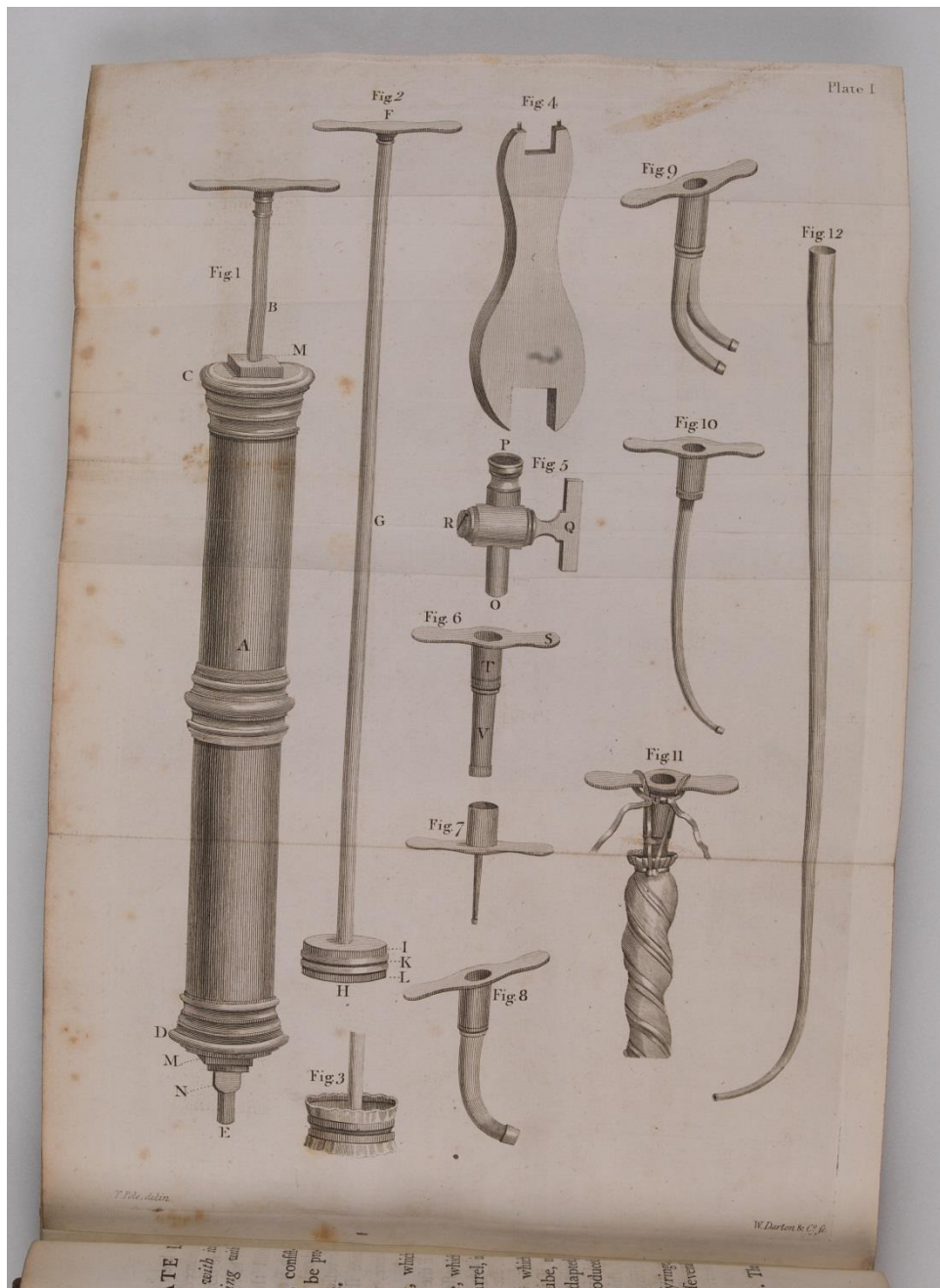


Fig. 2.4 Engraved illustrations of a brass injection syringe by W. Darton and Co. Taken from Thomas Pole's *The Anatomical Instructor; Or, an Illustration of the Modern and Most Approved Methods of Preparing and Preserving the Different Parts of the Human Body, and of Quadrupeds* (London, 1790). Courtesy of The Royal College of Surgeons of England.

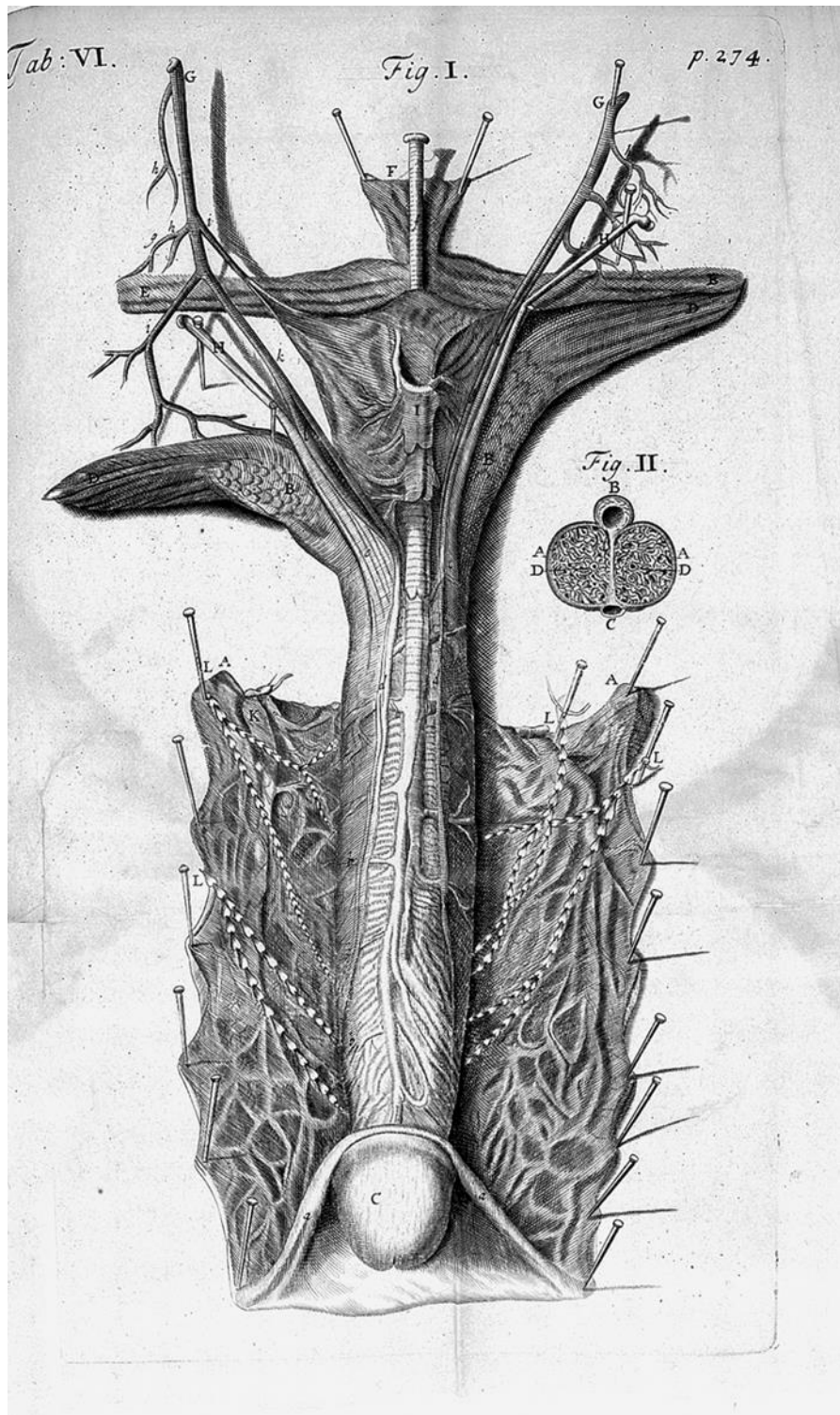


Fig. 2.5 Engraving of the “Fore-part of the Human *Penis* prepared with *Mercury*” (“Fig. I”) and the “two *Corpora Cavernosa Penis*, and that of the *Urethra*, after a Transverse Section, when Inflated and dry’d” (“Fig. II”) from James Drake’s *Anthropologia Nova* (1707, 273-5).



Fig. 2.6 A wax-injected human penis dyed in two tones, vermillion and brown, and prepared by John Hunter. Courtesy of the Museum of the History of Science, University of Oxford.

E F F I G I E S
PENIS HUMANI,

INJECTÂ CERÂ PRÆPARATI
EXHIBENS INVENTA ANATOMICA
ALIQVOT NOVA;

E T

PROPRIO COLORE TYPIS IMPRESSA

A

JOANNE LADMIRAL.



LEIDAE BATAVORUM,
Apud CORNELIUM HAAK, BIBLIOP.
Prostat quoque AMSTELAEDAMI,
Apud JACOBUM GRAAL, ET HENRICUM DE LETH.
M D C C X L I.

Fig. 2.7 A 1741 advertisement by Joanne LadmiraI for Bernard Siegfried Albinus' exhibition of a wax-injected human penis. This sheet accompanied a striking coloured mezzotint by LadmiraI of dissected human testicles.

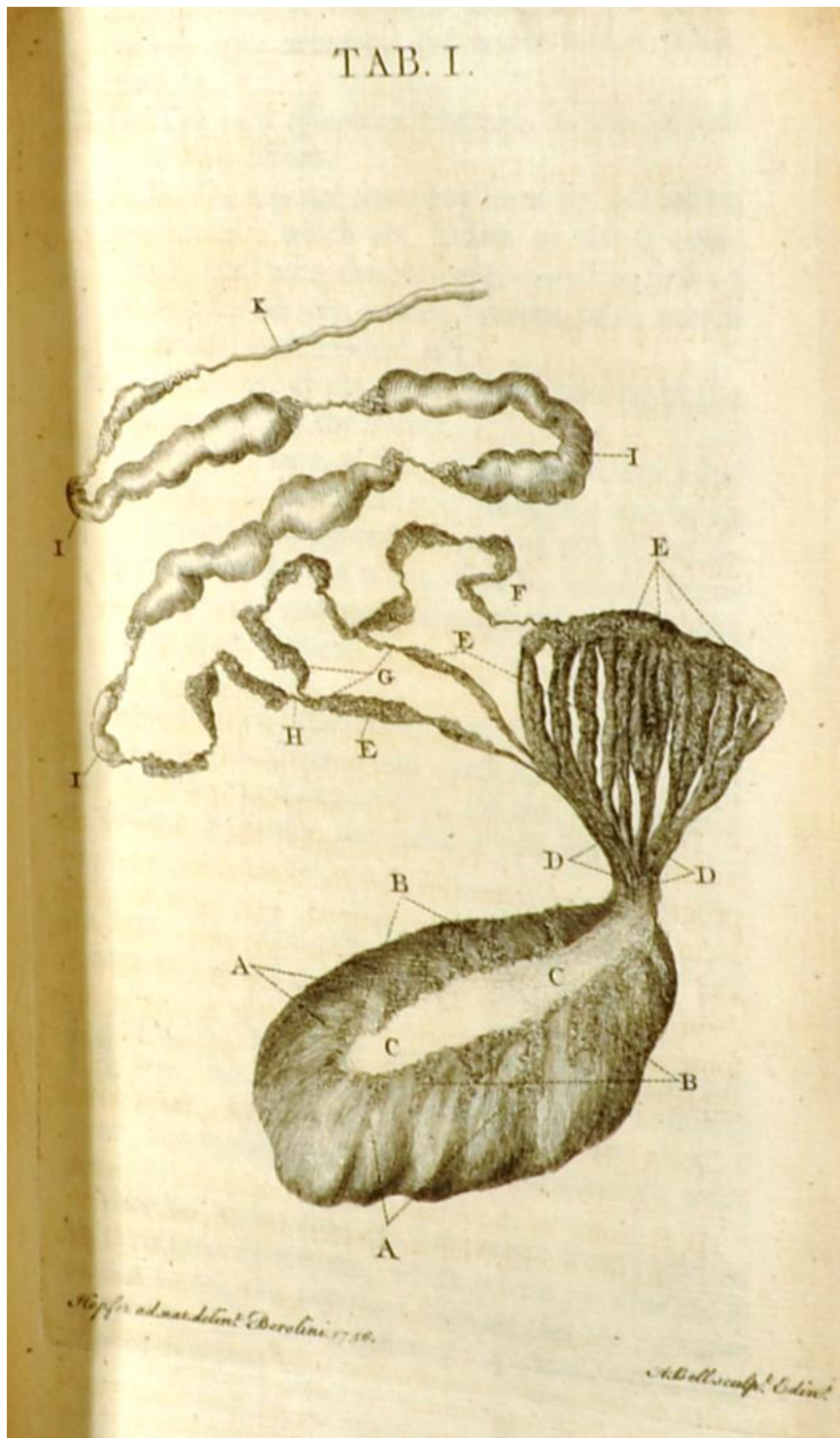


Fig. 2.8 Table I from the section “On the Seminal Ducts” in Alexander Monro *secundus*’s *Observations, Anatomical and Physiological...* (1758). The engraving, dated from 1756 and executed by A. Bell in Edinburgh, shows the mercury-injected ducts of a testis, which Monro used to illustrate “the history of the progress of the *semen* through the *Epidydimis*” (18). Courtesy of the Borthwick Institute for Archives, University of York.

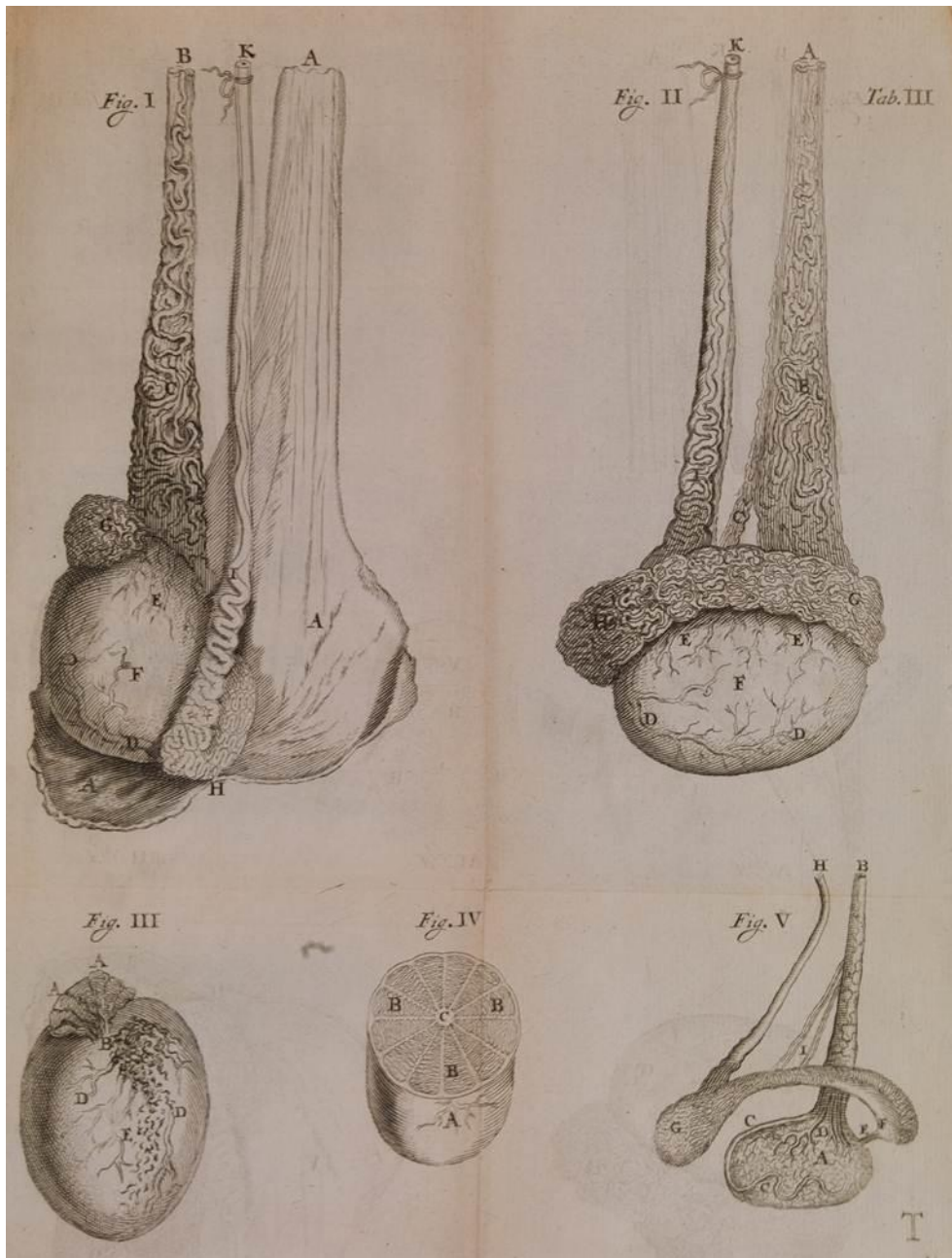


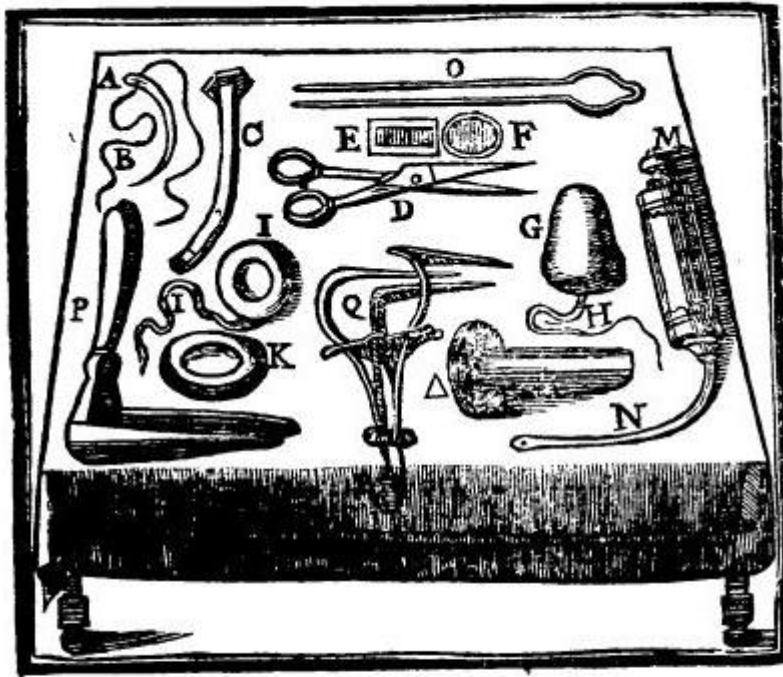
Fig. 2.9 Engravings of testicles from Regnier de Graaf's 1668 *De Virorum Organis Generationi Inservientibus, De Clysteribus et de Usu Siphonis in Anatomia*.



Fig. 2.10 Engraving of testicular tissue dissected and manipulated with pins and magnification but specified as being neither inflated nor injected. From William Cowper's *The Anatomy of Humane Bodies...* (1698).



Fig. 2.11 Mercury-injected boar epididymis in the original gold-painted wood frame from John Hunter's collection. From the Hunterian Museum and courtesy of The Royal College of Surgeons of England.

Other Instruments used in Midwifery.

- A. *A Crooked Needle to stitch the Perinæum.*
 B. *The Thred in the Needle.*
 C. *A Cannula, or Pipe, that is to be used.*
 D. *Scissars to cut the Thred.*
 E. *A Compress to be put under the Stitches.*
 F. *An Astringent Plaster.*
 G. *A Pessary, of the Shape of an Egg.*
 H. *The Thred that is fasten'd to it.*
 I. *A Round Pessary, with a Hole in the Middle.*
 K. *An Oval Pessary, with a Hole in the Middle also.*
 L. *The String to hold it by.*
 M. *A Syringe for a Woman.*
 N. *Its Crooked Pipe.*
 O. *A Dilator with two Branches.*
 P. *Another sort of Dilator.*

Q

Fig. 2.12 An illustration of the “Other Instruments Used in Midwifery” included in Pierre Dionis’ *A General Treatise of Midwifery*... (London: A. Bell, etc., 1719). The instrument labelled “M” is an obstetrical syringe.

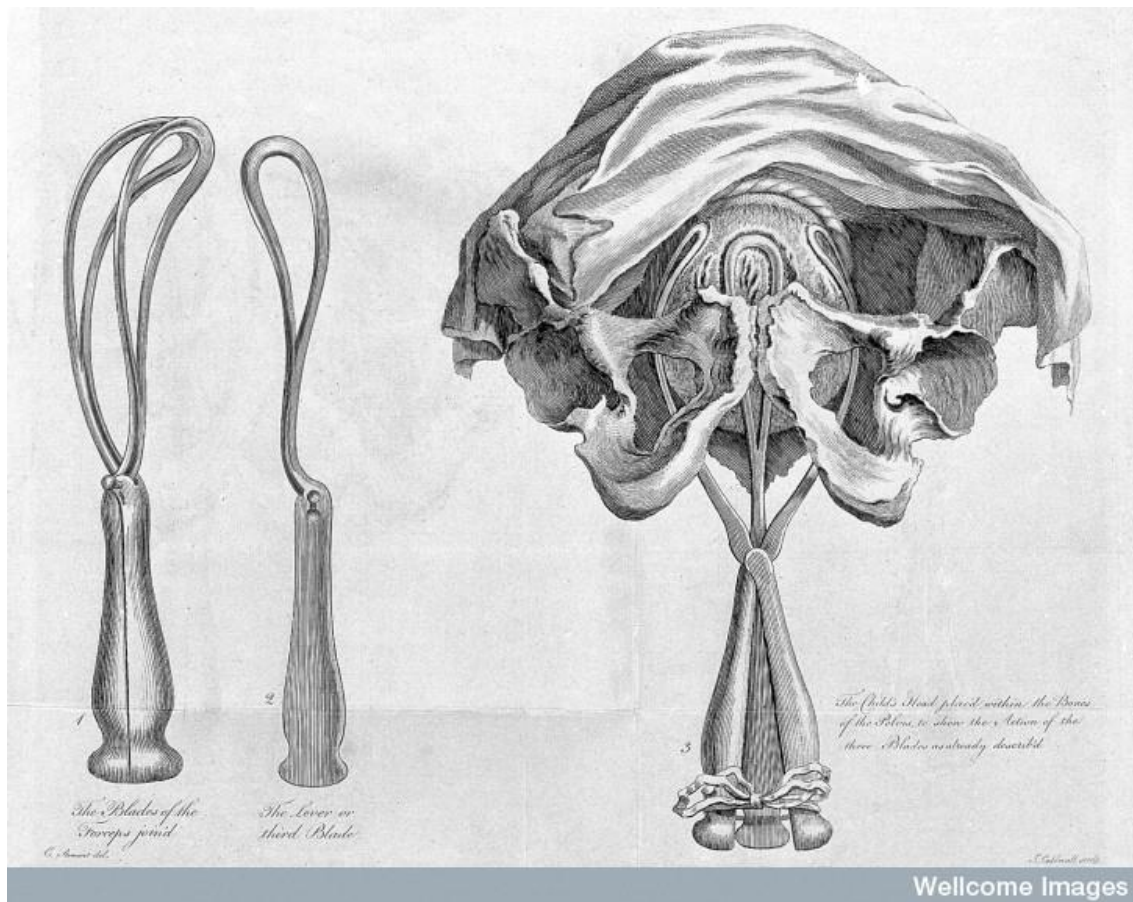


Fig. 2.13 An engraving of obstetrical forceps and their use in delivery, included in Leake's *A Lecture Introductory to the Theory and Practice of Midwifery* (London: printed for R. Baldwin...and T. Evans, 1773). Wellcome Library, London.



Fig. 2.14 a/b A female anatomical model in wax made by Anara Morandi Mazzolini of Bologna, c. 1760. Wellcome Library, London.



Wellcome Images



Fig. 2.15 A human gravid uterus with the anterior wall removed and a wax-injected placenta showing the vasculature. The injection is two tones, blue and red, with an area of extravasation leaking. From the Hunterian Museum and courtesy of The Royal College of Surgeons of England.

Chapter Three: Exquisite Sense—Sexual Pleasure and Pain

Nature tack'd a more than ordinary pleasing Sensation and Desire to each Sex, in the Act, by giving those Parts such a quick tender Sense and transporting Titillation, and which with all the artillery of Reason we are not able to controul.¹

Anatomists, as the previous chapter argues, demonstrated that male and female organs of generation were exquisitely sensitive and had a close connection with the brain through nerves. Pleasure—like desire and appetite—could be derived from either the mind or body. Both origins of pleasure could inspire a similar feeling in the other through sympathy communicated via nerves and animal spirits. However, the more worrisome source of pleasure was the organs of generation. From these organs arose powerful carnal pleasures that, as John Marten described, undermined the control of mental reason. Worse yet, these bodily sensations could rouse the mind into a sympathetic state, which could lead to lewd and imprudent thoughts and behaviour. This concern about the influence of carnal sensations and feelings on the rational mind existed before and after the eighteenth century. Because the physiology of animal spirits and ideas about sensitive bodies were essential to the culture of sensibility, these concerns about sexual sensations gained extra significance in the eighteenth century. Animal spirits were an immediate and tangible mechanism that exerted the innate sexual qualities of the genitals onto the brain and the mind.

This chapter examines the influence of the physiological concept of animal spirits on eighteenth-century medical and philosophical discussions about sexual sensations, especially pleasure but also pain.² Lisa Wynne Smith concludes from examining consultation letters received by two early eighteenth-century physicians, Étienne-François Geoffroy in Paris and the Sir Hans Sloane in London, that “humoralism fundamentally shaped sufferers’ experiences of their bodies, as revealed by descriptions of internal sensations and body/mind overlap.”³ However, nerve physiology based on animal spirits as advanced by late seventeenth- and eighteenth-century anatomists and medics became the new and favoured paradigm for learned discussions about the nature of sexual feelings and particularly how they affected the mind. Further, these ideas about sexual sensations were not exclusively medical; rather, physiological understandings of sensation corresponded to theological, philosophical, and literary discussions about sexuality and the mind. In

¹ John Marten, *Gonosologium Novum: or, a New System of all the Secret Infirm and Diseases, Natural, Accidental, and Venereal in Men and Women* (London, 1709), 2.

² Pain, as connected with venereal disease, is discussed further in chapter four.

³ Lisa Wynne Smith, “‘An Account of an Unaccountable Distemper’: The Experience of Pain in Early Eighteenth-Century England and France,” *Eighteenth-Century Studies* 41, no. 4 (2008), 463.

particular, materialists, deists, and Epicureans especially examined the influences of bodily sensations. One important bridge between theoretical medical treatises and social discussions were the abundance of moral-medical tracts published in eighteenth-century Britain. These often relied upon nerve physiology in cautioning against unhealthy sexual lifestyles and reproductive practices. But most significantly, the culture of sensibility recognized the potential of sexual sensations to powerfully affect individuals' thoughts, choices, and behaviours.

There was a pre-existing discourse about how sexuality and bodily sensations affected the mind by inspiring motives and choices. Notably, Christian theology held carnal desires and the soul's will to be opposing forces that principally directed human actions. Late seventeenth-century nerve physiology and eighteenth-century sensibility adjusted this relationship: sensations from the body, especially sexual sensations, and mental reason were opposing influences that determined thought and behaviour. In particular, Thomas Willis, John Locke, and Walter Charleton influentially advanced ideas that sexual pleasure was problematic when not controlled by the rational mind. Willis used sexual pain and pleasure as central examples for describing the internal struggle between the animal or carnal and the spiritual or rational. Locke designated pleasure and pain as motivations for thoughts and behaviours: simply put, humans were driven to attain pleasure and avoid pain.⁴ Charleton blended those physiological ideas with Epicurean philosophy.⁵ Subsequent medical and literary writers who addressed sexuality reiterated regularly the idea that mental reason and bodily sexual feelings vied for control of human thoughts and actions. This contest between the sexual body and rational mind occurred through the animal spirits.

Literature of sensibility made frequent use of sensations deriving from both body and mind as motivations for characters. One example was given by the most important English poet of the early eighteenth century, Alexander Pope, who described a lack of feeling as undesirable in his poem "Eloisa to Abelard":

A cool suspense from pleasure and from pain;
Thy life a long, dead calm of fixed repose;
No pulse that riots, and no blood that glows.
Still as the sea, ere winds were taught to blow,

⁴ See John W. Yolton, *The Two Intellectual Worlds of John Locke: Man, Person, and Spirits in the Essay* (Ithaca: Cornell University Press, 2004), 84. Yolton had also emphasized Locke's use of animal spirit physiology (57).

⁵ Catherine Wilson describes Locke's and Charleton's relationships with Epicureanism, and emphasized Pierre Gassendi's influence on seventeenth-century Epicurean thought as "the foreign parent of British empiricism." Catherine Wilson, *Epicureanism at the Origins of Modernity* (Oxford: Clarendon Press, 2008), 3.

Or moving spirit bade the waters flow;⁶

Here Pope suggested that the absence of pleasure and pain was the absence of passions, emotions, and physiological responses—an abnormally placid condition. In the culture of sensibility individuals of sentiment, passion, and feeling were often contrasted with the indifferent and passive. As Helen Yallop argues, “Passions were just as central for the mechanistic body as they were for the humoral body, and even more so for those who championed sensibility.”⁷ G. J. Barker-Benfield also notes that “sensibility intensified pleasure as well as pain.”⁸ Pain and pleasure were fundamental to the passions as well as the feeling abilities appreciated in the culture of sensibility. As Locke had explained, “Pleasure and Pain, and that which causes them, Good and Evil, are the hinges on which our *Passions* turn.”⁹ These sensations, therefore, inspired passions, thoughts, and behaviours. However, both medical and literary writers highlighted how sensations, feelings, and passions unrestrained by reason were extremely dangerous. This principle especially applied to sexual sensations. The dangers of unrestrained sexual sensations were commonly discussed in relation to certain types of figures: Epicureans, women of pleasure, libertines, adventurers, and various other kinds of hedonists.¹⁰ But, more generally, the influence of sexual sensations and passions were thought to be common to all reproductively capable females and males, particularly those with fine sensibility.

The most explicit literary examination of the effect of bodily sexual sensations on the mind in terms of the physiology of sensibility is one of the most controversial and best-selling erotic texts of the time, John Cleland’s *Fanny Hill*.¹¹ This novel, as Peter Wagner observes, “attempts to combine the sensual with the sentimental.”¹² As Frederick Burwick has argued, *Fanny Hill* “assumes with the empiricists that perception is the source of knowledge” and particularly the “sympathetic excitation of the senses.”¹³ The dynamics of animal spirits—e.g. how they were stimulated, how they were made or spent, and how they

⁶ Alexander Pope, “Eloisa to Abelard,” in *Alexander Pope: Selected Poetry* (Oxford: Oxford University Press, 2008), 62.

⁷ Helen Yallop, *Age and Identity in Eighteenth-Century England* (London: Pickering & Chatto, 2013), 92.

⁸ G. J. Barker-Benfield, *The Culture of Sensibility: Sex and Society in Eighteenth-Century Britain* (Chicago: University of Chicago, 1992), 189.

⁹ John Locke, *An Essay Concerning Humane Understanding* (London, 1690), 113.

¹⁰ For these eighteenth-century identities and their relationships to each other, see Randolph Trumbach, *Sex and the Gender Revolution: Volume One; Heterosexuality and the Third Gender in Enlightenment London* (Chicago: University of Chicago Press, 1998).

¹¹ For the reception of *Fanny Hill*, see Peter Wagner, *Lust & Love in the Rococo Period* (Nördlingen: Delphi, 1986), 27.

¹² Peter Wagner, *Eros Revived: Erotica of the Enlightenment in England and America* (London: Paladin, 1990), 220.

¹³ Frederick Burwick, “John Cleland: Language and Eroticism,” in *Erotica and the Enlightenment*, ed. Peter Wagner, 41-69 (Frankfurt am Main: Peter Lang, 1991), 49. Burwick illustrates the significance of Cleland’s philology in his erotic novel.

affected the body and mind—determined how Cleland portrayed sexual feelings. Yet, even though an erotic and prohibited novel,¹⁴ *Fanny Hill* promotes the need for reason and warns against abandoned sexual indulgence on the basis of nerve physiology, which stance was in keeping with general medical opinion.

With Michel Foucault and Thomas Laqueur in the vanguard, scholars have regularly argued that during the eighteenth century pleasure went from being necessary for health, sex, and reproduction to being relatively unimportant.¹⁵ This change was only part of a larger trend, in which bodily and sexual sensations had less immediate influence on the mind. Until the 1780s, bodily feelings and mental states were construed by medical theorists as dependent and in constant interaction. Following from the mutual influences between the physical and mental self that Willis and Locke emphasized, pain and pleasure were seen as key motives for people's actions and indicators of their health. But, as nerves became disentangled from sensibility, as animal spirits no longer connected soul and body, so too did pleasure cease to dominate discussions about human motivations. Without the animal spirits in physiology, there was no reason to believe that genitalia exercised a will of their own. Sensations became understood as more dependent on the brain's role, and sexual sensations did not exercise so great a power in the imaginations of medics.

In eighteenth-century philosophical discussions about human motivations, there was a tradition that harked back to Locke, and in which the same fundamental notion as late seventeenth-century physiologists and philosophers existed: bodily sensations provided experience but impinged upon reason. Political philosophers at the end of the eighteenth century, particularly utilitarians, developed these earlier ideas about right individual choices being those that offer the greatest, lasting pleasure whereas temporary, concupiscent pleasures were wrong or ultimately less beneficial. That particular late eighteenth-century political philosophy is the endpoint of this chapter and, perhaps, represents the culmination of more than a century's worth of philosophical discussions about how pleasure and pain influenced choice and behaviour.

¹⁴ For the publishing and legal history relating to *Fanny Hill*, see James Grantham Turner, "The Whores Rhetoric: Narrative, Pornography, and the Origins of the Novel," *Studies in Eighteenth Century Culture* 24 (1995): 297-306.

¹⁵ See Michel Foucault, *The History of Sexuality* vol. 2: *The Uses of Pleasure* (London: Penguin, 1992 [orig. 1984]); Thomas Laqueur, "Orgasm, Generation, and the Politics of Reproductive Biology," *Representations* 14 (Spring, 1986), 1. Laqueur notes, "Near the end of the century of Enlightenment, medical science and those who relied upon it ceased to regard the female orgasm as relevant to generation." More recently, this progression was noted in Faramerz Dabhoiwala, *The Origins of Sex: A History of the First Sexual Revolution* (London: Allen Lane, 2012), 142.

Nerve Physiology of Pleasure and Pain

To understand the importance of sexual pleasure and pain in the eighteenth-century culture of sensibility, one must realize the central role sensations had generally played in early modern discussions about human choice and behaviour. As this section shows, late seventeenth-century physiological discussions about pleasure and pain that referred to animal spirits prompted greater philosophical attention to how sensations affected both the mind and body. Within discussions of pleasure and pain, sexual sensations played an important role. Sexual sensations regularly represented the epitome of bodily feelings, desires, appetites, passions, and nervous influence on the mind. The effect of sexual sensations on reason became an especially pertinent topic in both medical and philosophical writings. However, the imagination could also inspire sexual feelings or desires. This largely physiological perception of sexual sensations and the rational mind was at the core of eighteenth-century understandings and representations of sensibility.

Innervating the Flesh

Seventeenth-century thinkers like Thomas Hobbes considered pleasure and pain physiologically and equated them to good and bad.¹⁶ In his treatise on statecraft, *Leviathan*, Hobbes wrote,

There is no action of man in this life, that is not the beginning of so long a chayne of Consequences, as no humane Providence, is high enough, to give a man a prospect to the end. And in this Chayn, there are linked together both pleasing and unpleasing events; in such manner, as he that will do any thing for his pleasure, must engage himselfe to suffer all the pains annexed to it; and these pains, are the Naturall Punishments of those actions, which are the beginning of more Harme than Good. And hereby it comes to passe, that Intemperance, is naturally punished with Diseases.¹⁷

Using ideas about sensations, mechanics and passions, Hobbes extrapolated from how individuals make choices based on foreseeable sensations as consequences to how society works. But, Hobbes discussed these sensations and passions in terms of “vital motion[s] of

¹⁶ According to Hobbes, “Every man by naturall passion, calleth that Good which pleaseth him for the present, or so far forth as he can foresee; and in like manner, that which displeaseth him, Evil.” Thomas Hobbes, *De Copore Politico, or, The Elements of Law, Moral and Politick...* (London: printed by T. R. for J. Ridley, 1652), 37. For his emphasis on sense perception and thought, see Cees Leijenhorst, “Sense and Nonsense about Sense: Hobbes and the Aristotelians on Sense Perception and Imagination,” in *The Cambridge Companion to Hobbes’s Leviathan*, ed. Patricia Springborg (Cambridge: University of Cambridge Press, 2007), 82-109.

¹⁷ Thomas Hobbes, *Leviathan or the Matter, Form and Power of a Common Wealth Ecclesiasticall and Civil* (London: Andrew Crooke, 1651), 193.

the heart.”¹⁸ A few decades later such discussions would more frequently refer to animal spirits in nerves that flowed around the body and brain. That change in physiological reference reflected a profound change in understandings of the interrelation of bodies and minds. External events caused sensations that were now carried by animal spirits to more immediately affect the brain and influence the mind. Therefore, to control one’s mind required avoiding certain external stimuli or, as some late seventeenth-century writers argued, using one’s reason to control those sensations. Within the new physiological nerve paradigm, pain and pleasure had a prominent role in determining thought and behaviour.

According to Christian theological traditions, corporeal experiences of pleasure and pain infringed upon the will of the spirit. However, late seventeenth-century physiological discussions emphasized reason, rather than spirituality, as the moderator of sensations and passions. Willis described the rift between the flesh and spirit in terms of nerves. While stressing the biblical idea that “The Flesh lusts against the Spirit, and the Spirit against the Flesh,”¹⁹ he also advanced a distinctly physiological notion. For Willis there were two competing centres of impulses within the body—the flesh and spirit—that physically affected one another through bodily and nervous fluids.²⁰ He expounded how “*the Wars and Strivings between our two Appetites, or between the Flesh and Spirit, both Morally and Theologically inculcated to us, are also Physically understood.*”²¹ The emphasis in Willis’s writing fell on the role of the physical and sensory experiences mediated through the nerves. This focus followed questions about dualism and materialism central to Cartesian philosophy.²² But Willis also gave more sophisticated and nuanced physiological accounts

¹⁸ Lisa T. Sarasohn, “Motion and Morality: Pierre Gassendi, Thomas Hobbes and the Mechanical World-View,” *Journal of the History of Ideas* 46, no. 3 (1985), 375.

¹⁹ Thomas Willis, preface to “Two Discourses concerning the Soul of Brutes,” in *Dr. Willis’s Practice of Physick...* (London, 1684). Willis was repeating Galatians 5. 17: “For the flesh lusteth against the Spirit, and the Spirit against the flesh: and these are contrary the one to the other: so that ye cannot do the things that ye would” (KJV). For more discussion on this paradigm of flesh and spirit in iatromechanism, see Allison Muri, *The Enlightenment Cyborg: A History of Communications and Control in the Human Machine: 1660-1830* (Toronto: University of Toronto Press, 2007), 132.

²⁰ Nearly a century later, Mackenzie reiterated Willis’s understandings in a tract about pleasure: “the carnal and the spiritual mind... the flesh and the spirit.” John Mackenzie, *The Love of Pleasure: Inconsistent with Reason, and with the Peculiar Spirit of Christianity* (Edinburgh, 1772), 3. Mackenzie’s sermon argued that the apostle Paul having “abstained from all commerce with the sex” was an example of how to conquer “the most ungovernable passions” (4).

²¹ Willis, “Soul of Brutes,” in *Dr. Willis’s Practice*, preface.

²² For further discussion of these ideas in seventeenth- and eighteenth-century philosophy and physiology, see Timo Kaitaro, “Brain-Mind Identities in Dualism and Materialism: A Historical Perspective,” *Studies in History and Philosophy of Science; Part C: Studies in the History and Philosophy of Biological and Biomedical Sciences* 35, no. 4 (2004): 627-45; Liam P. Dempsey, “Thinking-Matter Then and Now: The Evolution of Mind-Body Dualism,” *History of Philosophy Quarterly* 26, no. 1 (2009): 43-61.

of how corporeal sensations, especially venereal sensations, butted against the higher faculties of morality and reason.

Willis's physiological model for pleasure and pain helped establish later perceptions of sense, feeling, and emotion in the culture of sensibility. For instance, he explained how outward signs of sensations mirrored inward motions of animal spirits. The swelling, redness, and heat of inflammation was, according to Willis, caused by "spirits being pulled from their mutual embraces, and dissipated, are ill at ease, and incur the passion of pain or grief."²³ This disturbance put the spirits "to flight," which movement was "communicated by a continued order of other spirits, to the first Organ of Sense, it stirrs up the Spirits dwelling there into the like confusions, so a perception is caused of grief or pain inflicted outwardly."²⁴ These dispersed spirits effected changes in perception, outward appearance, and emotion. Likewise, sensibility was based largely on the idea that external conditions invoked internal feelings and emotions, which reflected outwardly. Pleasure worked similarly to pain, but arose from the reverse cause: "a pleasant stroaking being made upon the Organ of Sense, the Spirits flock thither, and presently being thickly gathered together, and overspread with a certain delight, they do as it were exult and rejoyce together in the Organ."²⁵ This pleasant flocking of the spirits was then communicated "like triumph or rejoycing within the *Corpus striatum*, a perception of pleasure is stirred up."²⁶ Pleasure and pain were entirely understood as resulting from the fluid movements, the shifting gradients and varying turbulences, of animal spirits.

From the late seventeenth until the late eighteenth century, the medical elite conceived of a nervous anatomical location where the sensations of the body met the mind; that location was the "sensorium." Willis described how pleasurable feelings and wanton desires conveyed upward by animal spirits in nerves arrived at the sensorium and met with

²³ Willis, "Of the Scurvy," in *Dr. Willis's Practice*, 157. For a discussion of the signs of pain in sensible bodies that Albrecht von Haller distinguished, see Ildikó Csengei, "Sensibility in Dissection: Affect, Aesthetics, and the Eighteenth-Century Body in Pain," *Hungarian Journal of English and American Studies* 9, no. 2 (2003), 157-8.

²⁴ Willis, "Of the Scurvy," in *Dr. Willis's Practice*, 157. cf. Cheyne's description of healthy/unhealthy passions: "As the *Passions*, when *slow* and *continued*, *relax*, *unbend*, and *dissolve* the *nervous* Fibres; so the sudden and violent ones *screw up*, *stretch*, and *bend* them; where by the Blood and Juices are hurried about with a violent *Impetuosity*, and all the *Secretions* are either stopp'd by the Constrictions, Cramps, and Convulsions begot by them, or are precipitated, crude, and unconcocted." George Cheyne, *An Essay of Health and Long Life* (London: printed for George Strahan and J. Leake, 1724), 98. However, Julien Offray de La Mettrie wrote: "since too great an extension of the nerves causes pain, and raises a fever, by which the mind is thrown into disorder, and becomes delirious alternately; since in its turn the mind, when too much agitated, communicates the disorder to the body." Julien Offray de La Mettrie, *Man a Machine; Translated from the French of the Marquiss D'Argens* (London: W. Owen, 1749), 63.

²⁵ Willis, "Of the Scurvy," in *Dr. Willis's Practice*, 158.

²⁶ *Ibid.*

the individual's intellectual mind.²⁷ In Steven Blankaart's *The Physical Dictionary*, first published in 1684 with several editions following, the *sensorium commune*, or "the Seat of common Sense," is described as "that part of the Brain in which the Nerves from the Organs of all the Senses are terminated, which is in the beginning of the *Medulla Oblongata*."²⁸ The sensorium was both an anatomical nexus for nerves and a metaphysical margin where reason and will became impressed onto the corporeal body. This duality is also present in Blankaart's understanding of sense: "Sense is when the Motion impressed by the outward Objects upon the Fibres of the Nerves is convey'd, by the help of Animal Spirits in the Nerves, to the common Sensory of *Medulla Oblongata*."²⁹ In the 1710 treatise, *The Sensorium: A Philosophical Discourse of the Senses*, the natural philosopher Matthew Beare confirmed Blankaart's definitions.³⁰ After animal spirits from the body passed their motions up into the sensorium, their influences continued into the brain, "having past from the common Sensory [and] stirred up the Imagination, the Spirits, reflecting from thence, and flowing back towards the nervous Appendix, raise up the Appetite and Local Motions."³¹ In other words, sexual pleasure and desire burrowed deep into the brain and psyche.

During the eighteenth century the sensorium, like sensibility, became less exclusively a medical term and took on wider cultural meanings. Literature of sensibility adopted principles of nerve physiology and with it the sensorium idea. The sensorium often specifically represented crisis moments in sexual scenarios, when moral restraint and rational choice collided with sexual desires. Laurence Sterne, for instance, implicated the sensorium as central to sensibility and sexual actions. In *A Sentimental Journey*, Yorick eulogized:

—Dear sensibility! source inexhaustible of all that's precious in our joys, or costly in our sorrows! thou chainest thy martyr down upon his bed of straw—and 'tis thou who lifts him up to HEAVEN—eternal fountain of our feelings!—'tis here I trace thee—and this is thy divinity which stirs within

²⁷ cf. Barker-Benfield, *Culture of Sensibility*, 5. In his discussion of the sensorium, Barker-Benfield fails to recognize the physiological meanings and interprets "sensorium" in only a metaphysical sense. Rather, discussions of the sensorium typically negotiated the pervasive sense of materialist physiology with the dogged sense of vitalism and spirituality.

²⁸ Steven Blankaart, *The Physical Dictionary*, 4th ed. (London, 1702), 280.

²⁹ *Ibid.*

³⁰ Matthew Beare, *The Sensorium: A Philosophical Discourse of the Senses* (Exeter, 1710), 14. According to Malcolm Flemyng, the "*sensorium commune*" was the "origin of the nerves." Malcolm Flemyng, *The Nature of the Nervous Fluid, or Animal Spirits, Demonstrated...* (London: printed for A. Millar, 1751), 34.

³¹ Willis, "Of the Anatomy of the Brain," in *Dr. Willis's Practice*, 79.

me... all comes from thee, great—great SENSORIUM of the world! which vibrates, if a hair of our heads but falls upon the ground.³²

This panegyric on sensibility emphasizes the rushing swell of feelings that collects at the sensoriums of sensible individuals. Sterne's description of sensibility also responded to the idea that sensation could overwhelm the mind, which idea Locke had explored in depth decades earlier.

Sensations in Lockean Philosophy

With the introduction of nerve physiology, moral discussions about pain and pleasure received renewed attention and emphasis on how immediate sensations influenced thought. Similar to Hobbes, but more exhaustively, Locke argued that pleasure and pain were essential to human conceptions of good and bad. As Locke theorized,

That which is properly good or bad, is nothing but barely Pleasure or Pain.

But because not only present Pleasure and Pain, but that also which is apt by its efficacy, or consequences, to bring it upon us at a distance, cannot but move the Will, and determine the choice of a Creature, that has foresight; therefore *things also that draw after them Pleasure and Pain, are considered as Good and Evil.*³³

Locke's basic proposition—that which is pleasurable or painful is respectively good or evil—is both a simple and a complex equation. It is simple in that it reduces morality to a binary of human feelings, which are assumed to be innate and universal.³⁴

However, this equation is complicated because it suggests human morality, will, and behaviour derive from a blend of physical conditions and mental capacities, such as the ability to foresee which actions will ultimately lead to the greatest pleasure or pain. Locke also argued that bodily sensations not only equated to good and bad but also reward and punishment.

Morally Good and Evil then, is only the Conformity or Disagreement of our voluntary Actions to some Law, whereby Good or Evil is drawn on us, from the Will and Power of the Law-maker; which Good and Evil, Pleasure or Pain, attending our observance, or breach of the Law, by the Decree of the Law-maker, is that we call *Reward* and *Punishment*.³⁵

In aligning pain with moral wrong and punishment, and good with moral right and reward, Locke stressed people's ability to choose one or the other. He presented another

³² Laurence Sterne, *A Sentimental Journey through France and Italy*, in *The Florida Edition of the Works of Laurence Sterne*, ed. Melvyn New and W. G. Day (Gainesville: University Press of Florida, 2002 [orig. 1768]), 6: 155.

³³ Locke, *An Essay*, 127.

³⁴ *Ibid.*, 113. Locke expounded pain and pleasure as the “simple *Ideas* of the Senses.”

³⁵ *Ibid.*, 157.

complication to this simple equation: infinite and continuous clashes of will and flesh preceded every motivation and action. Therefore, regardless of how well “furnished with the Faculties of Understanding and Will,” a person without pain and pleasure “would be a very idle, unactive Creature, and pass his time only in a lazy lethargick Dream.”³⁶ Later deists expanded on Locke’s notion that God designed pain and pleasure as essential to life and advanced the idea that distinguishing “Life and Consciousness from unactive unconscious Matter [is to] know or be sensible of Suffering or being acted upon.”³⁷ This line of theorizing presented a further break from earlier theological discussions by employing the enlightenment idea of man as a machine.³⁸ Increasingly, explanations of human decisions and actions were confined to bodies, minds, and physical environments.

However, making a wrong choice, for instance, would make subsequent wrong choices easier. The tendencies based upon past choices formed individuals’ characters. Therefore, each conflict between bodily sensations and rational will added something to a person’s character. Without “Consciousness of our Actions and Sensations, especially of Pleasure and Pain,” Locke suggested, it would “be hard to know wherein to place personal Identity.”³⁹ Virtue was also forged from the wilful control of the desires and feelings associated with bodily pleasures and pains.⁴⁰ To summarize, Locke viewed pain and pleasure as an integral part of moral good and evil, a constant motive in human choice, and a character-forming experience. These philosophical ideas of pleasure and pain that Locke proposed not only correlated to a greater physiological connection to sensation and desire to nerves, but also became the focal ideas about sexuality explored in the culture of sensibility.

³⁶ Ibid., 52.

³⁷ Benjamin Franklin, *A Dissertation on Liberty and Necessity, Pleasure and Pain* (London, 1725), 14-5.

³⁸ Ibid., 15.

³⁹ Locke, *An Essay*, 40. John Sutton describes how, “For John Locke, a hierarchy of dependence ran from religion and morality through personal identity, by way of consciousness as extended by memory, which rested in turn on fleeting animal spirits.” John Sutton, *Philosophy and Memory Traces: Descartes to Connectionism* (Cambridge: Cambridge University Press, 1998), 157. Wilson also discusses Locke’s changing “reflections on personal identity.” Wilson, *Epicureanism at Modernity*, 151-2. For a discussion of Locke’s “association of identity with consciousness,” see Roy Porter, *Flesh in the Age of Reason* (London: Allen Lane, 2003), 94-109.

⁴⁰ Anthony Ashley Cooper, Earl of Shaftesbury, explored these connections between pleasure, morality, class, and behaviour in *Characteristicks of Men, Manners, Opinions, Times*, vol. 1, 3rd ed. (London, 1723 [orig. 1711]): “But when we see... what *Riot and Excess* naturally produce in the World; when we find that by *Luxury’s* means, and for the service of vile Interests, Knaves are advanc’d above us, and the vilest of Men prefer’d before the honest; we then behold VIRTUE in a new Light” (141); “Can there be *Strength of Mind*; can there be *Command over one’s self*; if the Ideas of Pleasure, the Suggestions of *Fancy*, and the strong Pleadings of Appetite and Desire are not often withstood, and *the Imaginations* soundly reprimanded, and brought under subjection?” (312). “As usual as it is with Mankind to act absolutely by Will and Pleasure” (210).

The loss of reason, rather than the condemnation of the soul, became a commonly cited concern associated with heeding bodily feelings and indulging carnal desires. Many late seventeenth-century writers described and discussed how human choices and actions were the outcome of bodily desires in contention with rational thought.⁴¹ Accordingly, Willis warned, "Inclination, and indulging Pleasures, most often grows deaf to Reason."⁴² In examining the subject, Willis positioned religious concerns as only an aid to reason's struggle against bodily pleasures. He suggested that the internal conflict

does not truly cease, till this or that Champion becoming Superior, leads the other away clearly Captive. Altho in the mean time, to the Establishing the Empire of the Rational Soul, also for the Vindicating of its Right and Principality, from the Usurpation of the Sensitive Soul, the Precepts of Philosophers, and Moral Institutes are framed; and when these can do little, Sacred Religion gives far more potent helps.⁴³

Emphasized through imperialistic metaphor, the "Empire of the Rational Soul" reigned only by constantly defending itself from a barrage of pleasurable sensations.⁴⁴ To have the rational soul succumb to pleasure was to sacrifice the elevated station of being human. Pleasure "seduces in us the Mind or Chief Soul, and snatches it away with it self, to role in the Mud of Sensual Pleasures: So that Man becomes like the Beast, or rather worse; to wit, for as much as Reason becoming Brutal, leads to all manner of Excess."⁴⁵ For Willis, this descent from human to animal correlated to an anatomical descent from the higher rational soul in the cerebrum to the animal soul in the inferiorly positioned brainstem. When overcome by pleasure and directions from the lower mind or body, people behaved as animals. Therefore, representations of the carnally-minded often depicted irrational beasts, which were appetite-driven, savage, and predatory.

⁴¹ For one notable example of a late seventeenth-century treatise that continued to be published into the eighteenth century, see Richard Lucas, *An Enquiry after Happiness* (London: printed for George Pawlett and Samuel Smith, 1685). "Man is left to a strange uncertainty, undetermin'd by the Reason of the Mind, or the Instinct or Appetite of the Body, mo'd indeed successively by each, perfectly govern'd and over-rul'd by neither. But it were well for Man that the Inclinations of these two different Principles were so justly pois'd, that he were naturally left in a true Liberty and pure Indifference equally able to follow the Dictates of Reason, and the Appetites of Flesh and Blood: But alas! how Impetuous are the Lusts of the Body! how Irresistible are those Passions which the Objects of Sense aided by a Carnal Imagination raise in us! On the other side, how Cold are the Representations of Reason" (320).

⁴² Willis, "Two Discourses concerning the Soul of Brutes," in *Dr. Willis's Practice*, 43.

⁴³ *Ibid.* Willis also likens the conflict to "Twinns striving in the same Womb, or rather a Man clearly distracted or drawn several ways, by a double Army planted within himself."

⁴⁴ Porter noted that the soul in the late seventeenth century referred to the rational soul, as the "old Aristotelian vegetative and sensitive souls had disappeared in the body-machine." Porter, *Flesh in the Age*, 67.

⁴⁵ Willis, "Soul of Brutes," in *Dr. Willis's Practice*, 43.

Sensations in Epicurean Philosophy

Theories about carnal sensations impairing mental reason were closely associated with a philosophical discussion that came to prominence in late seventeenth- and eighteenth-century Britain: Epicureanism. The rise of Epicureanism correlated to broader interests and debates about how sexual processes and sensations affected the body and mind.⁴⁶ Debates about this philosophy often referred to physiological theories of pleasure and pain. But, those who derided pleasure-seeking philosophies also referred to physiology of pleasure and pain, wherein bodily desires upset rationality. Further, moralists similarly condemned and marginalized libertinism and Epicureanism by suggesting such lifestyles were base, animal, unhealthy, irrational, and unchristian.⁴⁷ These moral criticisms, especially in the eighteenth century, also incorporated medical concerns. Moralists emphasized how pleasure, especially sexual pleasure, eventually ravaged the body, mind, and spirit.⁴⁸

In 1656, the physician and physiologist Walter Charleton collected, translated, and edited *Epicurus's Morals*, which frequently and plainly advocated abstinence from sexual congress. According to the treatise, the “*sensuall delights of Venus*” are “never beneficiall to any, and pernicious to most.”⁴⁹ Like Willis and Locke, Epicurus had considered venery as a physiological concern: “For a man to abuse venereall delights with intemperance, is, in brief, to make his life void of vigour, anxious with Cares, painfull with Diseases, short in Duration.”⁵⁰ This advice anticipating the medical dietetics of sexuality and concern with the passions that would later be widely advocated by figures such as George Cheyne,⁵¹ who was a pietist and otherwise opposed to the Epicurean “physiological model of social-man based upon pragmatic checks to an egotistical, ruling passion of self-love.”⁵² *Epicurus's Morals* cautioned against adding “Fewell to the flames of *Venus*.”⁵³ It recommended being

⁴⁶ La Mettrie considered Epicureanism, libertinism, and deism in his physiological tract, *Man a Machine*, 51-2. Wilson suggests that “Experimentalism and libertinism... remained associated in the minds of critics.” Wilson, *Epicureanism at Modernity*, 240.

⁴⁷ John Armstrong, *The Oeconomy of Love*, 5th ed. (Dublin, 1742), 13.

⁴⁸ Dabhoiwala, *Origins of Sex*, 117.

⁴⁹ Epicurus, *Epicurus's Morals Collected Partly Out of His Owne Greek Text, in Diogenes Laertius, and Partly Out of the Rhapsodies of Marcus Antoninus, Plutarch, Cicero & Seneca; and Faithfully Englished*, trans. Walter Charleton (London, 1656), 80.

⁵⁰ *Ibid.*

⁵¹ For Cheyne, medical authority, and dietetics, see Steven Shapin, “Trusting George Cheyne: Scientific Expertise, Common Sense, and Moral Authority in Early Eighteenth-Century Dietetic Medicine,” *Bulletin of the History of Medicine* 77, no. 2 (2003): 263-97. For discussion of Cheyne’s diet advice in respect to the passions, see Anita Guerrini, *Obesity and Depression in the Enlightenment: The Life and Time of George Cheyne* (Oklahoma: University of Oklahoma Press, 2000): 118-53.

⁵² David E. Shuttleton, “‘Pamela’s Library’: Samuel Richardson and Dr. Cheyne’s ‘Universal Cure,’” *Eighteenth-Century Life* 23, no. 1 (1999): 65.

⁵³ Epicurus, *Epicurus's Morals*, 80. Bernard Mandeville discussed Epicurus’s idea that “the highest Good consisted in Pleasure,” yet did not promote the “sensual Ones, and the

“punctuall in the observance of a spare diet” to prevent the over “plenty and turgescence of seed, which arise from a too liberall diet, [and] are both sparks and fewell to the fire of Love.”⁵⁴ The main Epicurean argument against sex was that it ultimately led to less pleasure.⁵⁵ Epicurus made the unflattering observation that venery was “a Pleasure, which is but short, little, and not-necessary, and which might have been either otherwise enjoyed, or wholly omitted, men frequently expose themselves to very great pain, or most tedious and sore repentence.”⁵⁶ He argued further that the bodies of those who moderated carnal pleasures “neither enfeeble it with excessive venery, nor vex and macerate it with Diseases, nor torment it with pains.”⁵⁷ While allowing “the legitimate and moderate pleasures of the marriage bed,”⁵⁸ this treatise reproached illegitimate and adulterous sex as being against civil society and “after the manner of Wild Beasts.”⁵⁹ Such lowly carnal acts were naturally abhorred by “every man, in his right mind.”⁶⁰

Descriptions of carnal desire and bestial transformations were hyperbolic warnings used to reinforce moderate behaviours and virtuous attitudes. By the early decades of the eighteenth century, physicians had fully incorporated this conflict between sensuality and reason into their diagnostic repertoire and prescriptive practices. A lapse of reason caused by attention to pleasure cast the individual into a state of *distraction*. In his system of ideas, Locke argued that “Pleasure, if it be not very languid, and almost none at all, fills our narrow Souls, and so takes up all our Minds, that it scarce leaves any thought of things absent.”⁶¹ Pleasurable sensations were physically described as a stirring of the animal spirits, communicated along nerves, leaving impressions or traces on the mind, and filling space in the soul, causing distraction.⁶² Describing this, Willis suggested that pleasure “consists of an agglomeration of spirits with their gentle, caressing movements, conveyed through the nerves to the medulla oblongata, where they generate similar ideas, and excite other spirits

Gratification of our Passions.” Bernard Mandeville, *The Fable of the Bees: or, Private Vices Publick Benefits...* (London: printed for J. Roberts, 1714), 113.

⁵⁴ Ibid.

⁵⁵ Ibid., 83.

⁵⁶ Ibid., 82.

⁵⁷ Ibid.,

⁵⁸ Ibid., 83.

⁵⁹ Ibid., 84.

⁶⁰ Ibid., 86.

⁶¹ Locke, *An Essay*, 128.

⁶² See Yolton, *Thinking Matter*, 159-60. One anonymous eighteenth-century author related, “So far I have endeavoured to find out the source of pleasure in the soul, and the organs of sensation. According to their different modifications, there are always others in the brain, which are similar and proportional to them, the traces of which are retained by the memory.” Louis-Jean Lévesque de Pouilly, *The Theory of Agreeable Sensations*, trans. from French (London: printed for W. Owen, 1749 [orig. in French, 1736]), 96. According to Sutton, “Locke’s papers often mention Sydenham’s reliance on animal spirits in therapeutic practice.” Sutton, *Philosophy and Memory Traces*, 165.

to agreeable dances.”⁶³ These agreeable dances could cause a distracted mind, a loss of reason, and lead to improper behaviour. Sexual pleasure caused mental distraction, incapacitated worthier intellectual desires, and disrupted reason by physically causing a state of insensibility in the mind. This insensibility followed from ejaculation in both males and females, wherein animal spirits were expelled from the genitals, leaving the brain in a deficit of that material necessary for thought.⁶⁴ Orgasm was a moment when feeling overrode all bodily and mental capacities. Eighteenth-century representations of orgasms frequently involved the loss of sense, as if dead: “Just as we——, I cry’d, I faint, I die, / And fell down in a blissful Ecstasy.”⁶⁵ However, before orgasm, sexual pleasure could be so stirring as to create a total single-mindedness on the exquisite feeling, to the exclusion of all other senses, both bodily and mental. Sexual pleasure was the supreme foe of reason.

Physiology of Sexual Sense and Desire

Venereal pleasure was an exception to how other kinds of pleasure were physiologically understood. Venereal sensations sent “the animal spirits into heaps to the Organ of Sense,”⁶⁶ but also caused agitations and violent disruption of spirits. The singularity of this physiological mechanism prompted Beare to qualify that “*Venereal Sense* may be likewise joyn’d with the rest [of the senses], as being Instructed with its proper *Organs*, differing as much from the Sense of *Feeling*, as we find other *Organs* differ among themselves.”⁶⁷ Sexual sensations paradoxically, and uniquely, included the animal spirit motions of both pleasure and pain at once. This was one reason why venereal sensations were often likened to itches—they sometimes resembled an intermediate stage between pleasure and pain.

In terms of animal spirits, Willis described an itch as a kind of pain, since the relief of it felt pleasing.⁶⁸ This relief suggested to Willis that “Itching seems to be a middle-state between the beginning of Pain and Pleasure, or a passage of the Spirits from the rudiments of that, towards the full compleating of this.”⁶⁹ But, itches also proved useful in

⁶³ John Locke, *Thomas Willis’s Oxford Lectures*, ed. Kenneth Dewhurst (Oxford: Sandford Publications, 1980), 67.

⁶⁴ See chapter one for a fuller discussion of this physiological link between the groin and brain.

⁶⁵ “Delights of Venus,” 20.

⁶⁶ *Ibid.*

⁶⁷ Matthew Beare, *Sensorium*, 11.

⁶⁸ Thomas Willis, *An Essay of the Pathology of the Brain and Nervous Stock...*, trans. S. P. (London: printed by A. M. and R. R. for T. Dring, J. Leigh, and C. Harper, 1684), 57. In further discussing itches, Willis distinguished that such “Pain being distinct from Sadness and belonging to the Touch, is used to be defined, *A troublesome feeling proceeding from the dissolution of Unity...* that cause repelling the animal spirits.” Thomas Willis, “Pharmaceutice Rationalis, the First and Second Part,” in *Dr. Willis’s Practice of Physick being the Whole Works of that Renowned and Famous Physician* (London, 1684), 157.

⁶⁹ *Ibid.*, 158.

understanding how pleasure and pain related to emotional feelings. Samuel Johnson understood “itch” to have three meanings: scabies, an irritating feeling on the skin that is “eased by rubbing,” or “a constant teasing desire.”⁷⁰ It is notable that scabies and other itches were often associated with genitalia and sexual hygiene.⁷¹ Johnson’s definition of “to itch” also had sexual meanings: “To long; to have continual desire.”⁷² Herman Boerhaave described itches as a translation of a physical feeling to a desire. In remarking about relieving itches, he suggested that “Nothing is more pleasing than this Sense, nor is there any other corporeal Pleasure. It exceeds Titillation in a small Degree of greater Tension in the Nerves.”⁷³ Boerhaave even observed that “I have seen some Men faint away by the Excess of Pleasure which they have from thence received.”⁷⁴ Itches were strong, overwhelming, and irresistible like sexual feelings, which also caused people to faint away.

Itch, as a sexual inclination, was commonly used in bawdy writing. A broadside ballad entitled “News out of the Strand, OR, The Brewers Misfortune” circulated after the 7th of July 1662, when a London brewer in bed with two whores was found out by his wife and a constable. The Brewer, according to the ditty,

Was troubled with a leacherous Itch
And wanted a Whore to coole his breech,⁷⁵

Numerous written records used itch to negotiate the idea that spontaneous sensations in the groin drove people to pleasurably relieve their desires—desires not from the mind, but the body.

Physiological and anatomical descriptions of genitals represented carnal pleasure as exerting a substantial power within the human frame. William Harvey had stipulated that “sensitivity” applied “especially for pudendum, root of penis, nipples.”⁷⁶ Many decades later, Marten elaborated how “Venerous Ticklings” were an inherent quality in genitalia, which were “furnisht with more exact and exquisite Sense than any other parts of the Body besides.”⁷⁷ This physiological sensitivity united genitalia to the desires and emotions of the

⁷⁰ Samuel Johnson, *A Dictionary of the English Language* (London, 1755), s.v. “Itch.”

⁷¹ Herman Boerhaave, *Dr. Boerhaave’s Academical Lectures on the Theory of Physic...* (London, 1746), 5: 6.

⁷² *Ibid.*

⁷³ *Ibid.*, 5: 8.

⁷⁴ *Ibid.*, 5: 8-9.

⁷⁵ “News Out of the Strand, or, The Brewers Misfortune...,” broadsheet ballad (1662), ll. 6-7.

⁷⁶ William Harvey, *Lectures on the Whole of Anatomy: an Annotated Translation of Praelectiones Anatomiae Universalis*, trans., Charles O’Malley, Frederick Poynter, and Kenneth Russell (Berkeley: University of California Press, 1961), 42.

⁷⁷ Marten, *Gonosologium Novum*, 2. Likewise, Nikolai Detlef Falck described how “The vagina within is very nervous, and exquisitly sensible.” Nikolai Detlef Falck, *A Treatise on the Venereal Disease* (London, 1772), 38.

mind.⁷⁸ Accordingly, David Hartley suggested “these organs are endued with a greater degree of sensibility than the other parts from their make, and the peculiar structure and disposition of their nerves, whatever these be, we may expect, that they should be more affected by these general pleasurable states of the nervous system than the other parts.”⁷⁹ The extreme sensitivity of genitals to pleasure and pain conferred a delicate sympathy between them and the entire nervous body. Sympathy also allowed the mind to initiate pleasurable sensations and movements in animal spirits that were communicated to the genitalia. Marten delineated this communication as follows: “the fancy being struck with the apprehension of the Pleasure, the Animal Spirit is thereupon rous’d, and repairs with an impetuous force to the Nerves of the Organs of Generation.”⁸⁰ Sensations, and particularly pleasure, provided a profound physiological sympathy between the mind and groin. Marten even declared that sexual pleasure felt “as if the Soul was at once sallying out of the Body, to communicate it self to another.”⁸¹ No part of the physical or spiritual person evaded the sympathetic influence of pleasure. But, this kind of sympathy, this struggle between carnal and rational, was exclusive to adults.

Anatomists described physical development and sexual feelings as emerging in concert during puberty. Julien Offray de La Mettrie suggested that when a boy was at “fourteen or fifteen years of age, he scarce has a notion of the great pleasures that will attend him in the reproduction of his species; when a youth he knows not readily how to go about a sport which nature so quickly teaches all animals.”⁸² Hartley suggested that these pubertal changes took place in the seminal vesicles in males and the uterine sinuses in females, which made “these organs more particularly irritable.”⁸³ Yet, sensitive body parts were only one part of pubescent development; sexual fluids comprised another. Sexual fluids, including seed, semen, and milk, had inherently pleasurable qualities that matched a sensitive anatomy.

⁷⁸ Jan Swammerdam’s text on comparative anatomy described pleasure in organs of generation in the male bee as follows: “the root of the penis two remarkable nerves *nn* are inserted in the spermatic vessels, and which give many branches both to these vessels and to the root of the penis, contributing to the motion and titillation of these parts.” Jan Swammerdam, *The Book of Nature...* (London: C. G. Seyffert, 1758), 219.

⁷⁹ David Hartley, *Hartley’s Theory of the Human Mind...*, ed. Joseph Priestly (London: J. Johnson, 1775), 1: 86. This text is an abridged version of Hartley’s *Observations on Man* (1749).

⁸⁰ Marten, *Gonosologium Novum*, 12.

⁸¹ Interestingly, this description of sexual pleasure paralleled descriptions of intellectual pleasure. Pouilly suggested that reading and contemplation as an “exercise of the mind is so charming, that it sometimes transports the soul to such a degree, that she seems to have disengaged herself from the body.” Pouilly, *Theory of Agreeable Sensations*, 26.

⁸² La Mettrie, *Man a Machine*, 35.

⁸³ Hartley, *Theory of the Human Mind*, 1:86.

Seed, in particular, possessed a special titillating quality that caused pleasure through mere contact. Willis propounded how “the turgency of the seed” raised mutual excitement and consent in the penis and the brain, in the same manner that animal spirits moved by pleasurable sensations did.⁸⁴ As Laqueur has proposed, there was a long-standing idea linking “generative substances” with pleasure; however, he suggested that this pleasure was only due to “hypersensitivity” in specific body parts.⁸⁵ Although there was extra sensitivity along the reproductive tract,⁸⁶ those generative substances also contained an innate ability to excite nerves and animal spirits to pleasurable states. Such an idea inspired Rochester’s lines, “What must proceed from Man’s prolifick Juice? / Oh! that must please one sure to such Excess / What no one can its Charms in Words express.”⁸⁷ La Mettrie mused, “Who at first could have imagined, that one drop of the seminal liquor which is discharg’d in copulation, should be the occasion of such extatic pleasure, and afterwards spring up into a little creature, which in time, certain conditions being suppos’d, should itself feel the same transports?”⁸⁸ The generative power and pleasing quality of semen captivated imaginations, but so too did its healing ability. For example, the collection *A Cure for the Spleen* includes a ribald verse, sung to the tune of “Height ho, in Thomas and Sally.” This lyric is the tale of a “damsel just turn’d of fifteen / Who long had been plagu’d with a sickness call’d green.” While doctor’s pills offered no relief, a neighbouring shepherd had just the remedy: a “few drops” from “his vial.” Following the ingestion of this cure, the damsel soon never went “to bed without these drops” as the “liquor was life, so must needs give her joy.”⁸⁹ Charged with refined animal spirits, seed had many pleasure-giving benefits that were understood in medical terms.

However, pleasurable reproductive fluids were matched by painful pathological fluids, which also involved the animal spirits and inspired sympathy between the groin and the mind. Just as genitalia contained the seat of pleasure, they also housed the seat of venereal disease. Disease, which often followed illicit sexual conduct, impeded the sufferer’s pleasure, fertility, and health. This cause-and-effect equation was often stressed

⁸⁴ Willis quoted in Stephen Freeman, *A New Essay on the Venereal Disease: or, Every Person Afflicted with that Disorder their Own Physician...*, 2nd ed. (London: F. Newbery and Mr. Pearce, [1775?]), 26.

⁸⁵ Thomas Laqueur, *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA: Harvard University Press, 1990), 44.

⁸⁶ William Hunter stated that the inner membrane of urethra is very smooth and sensible. William Hunter, *Hunter’s Lectures of Anatomy*, ed. Nell Dowd (London: Elsevier, 1972), 97. James Cooke also mentioned that the urethral membrane is “very thin and sensible.” James Cooke, *Mellificium Chirurgiæ: or, the Marrow of Chirurgery...*, ed. Thomas Gibson (London: John Marshall, 1717), 312.

⁸⁷ “The Delights of Venus,” in “The Cabinet of Love,” appended to *The Works of the Earls of Rochester, Roscommon, Dorset...*, 4th ed. (London: E. Curll, 1714), 23.

⁸⁸ La Mettrie, *Man a Machine*, 76-7.

⁸⁹ “Song XXXVII,” in *The Cure for the Spleen...* (Newcastle, 1769), 48.

and characteristic of the moral-medical approach frequently used in literature about venereal maladies. Moral reformers also emphasized medical concerns related to venereal disease, which opened the way for anti-masturbation campaigns in the mid- and late eighteenth century.⁹⁰ The diary of Dudley Ryder, a non-conformist lawyer, politician, and baron (for a day), offers some insight into how moral-medicine was applied to discussions of sexual liberality. Ryder's entry for the 6th of September 1716 was as follows:

Rose before half-hour after 5. Drank the waters at Islington. Spent most of my time there with Dr. Lee. He talked with me about whoring. The old man talks of it with a very sensible relish of it, but I talked with him very gravely about the danger of a clap or pox by using it and also the great villainy of debauching and seducing young virtuous girls as is so common a practice.⁹¹

Ryder had a profound fear and fascination about prostitutes, and often tried to engage them. Yet, he expressed sentiments that were likely common among people of his age and class: a whoring lifestyle is bad for the body and soul. Ryder's account also highlights another way in which indulging sexual desires negatively affected thought: sexual diseases impinged upon one's rational mind.⁹² The reckless lifestyle of rakes went hand in hand with diseased groins and irrational behaviour. That notion provided a common narrative ending for lewd characters in mid-eighteenth-century fiction: wild desperation, poor decisions, and occasionally suicide.⁹³

Yet, strong sexual sensations also played a positive and fundamental role in medical understandings of generation, until the end of the eighteenth century when pleasure became seen as less integral to those physiological processes. Conception required pleasure in both sexes, particularly as fit seed was dependent upon a stimulated mind. Blankaart argued that "there is also in the Female a Matter which is called Seed, which proceeds from the *Prostates*, and frequently in their Lechery is emitted forth: The use of this is to raise Titillation, and render the Coition more pleasant."⁹⁴ Seed, and the pleasure it inspired, aroused the desire and lecherous behaviour necessary for procreative activity. As the herbalist, natural philosopher, and physician John Pechey wrote, the genitalia were "endued with an exquisite sense to stir up pleasure and venereal desire."⁹⁵ Some believed that without

⁹⁰ Sexual diseases, their symptoms, and the discussions surrounding them, are considered in further depth in chapter four.

⁹¹ Dudley Ryder, *The Diary of Dudley Ryder, 1715-1716*, trans. and ed. William Matthews (London, Methuen, 1939), 313.

⁹² See chapter four for more discussion on how sexual diseases upset the physiology of animal spirits and affected the mind.

⁹³ For a discussion of this narrative type, see chapter four.

⁹⁴ Blankaart, *Physical Dictionary*, 279.

⁹⁵ John Pechey, *The Compleat Midwife's Practice...* (London: printed for H. Rhodes, J. Philips, J. Taylor, and K. Bentley, 1698), 28.

seed or the organs that prepared seed, all desire for sexual intercourse was lost. Marten suggested that genitalia had to exert pleasurable influence over the mind in order for sex to occur. Temptations from the body or imagination had to seduce human wills into such base sexual activities; there are clear connections with Eve's fall into temptation and punishment of labour pains.⁹⁶ Mervyn Nicholson has described the eighteenth-century view that "Eve's disobedience is a revolt of appetite against reason, inferior against superior, a kind of insane attempt to reconstruct the cosmos."⁹⁷ This theological framework corresponded with medical discourse on sexual appetites. For instance, Marten reasoned that if "Venerous Ticklings" in genitals did not overcome reason, people would never indulge in an act "so Abject and Filthy, so Unclean and Brutish" as sexual intercourse.

The idea that genitals powerfully incited desires that control behaviour, which defies an individual's volition, featured in a tale Boerhaave recounted. A man from Germany, "who finding that his Daughter violated her Chastity, was so much anger'd, that he made an Incision in her Side and castrated the Girl, who from that time was not touched with any Inclinations to Venery."⁹⁸ This brief narrative ignores the possibility of sexual pleasure without the nervous contributions of the seed-generating organs. As Mary McAlpin has asserted, eighteenth-century "vitalists viewed puberty as the moment at which previously 'identical' children were 'born' or 'awakened'" to sex, by virtue of the fluids released into their bodies by their genitals.⁹⁹ Indeed, as a nervous centre, genitalia challenged individuals' autonomy, as their reason, rationality, and morality could be toppled by those parts' exquisite physical sensitivity.¹⁰⁰

⁹⁶ KJV, Genesis, 3:16.

⁹⁷ Mervyn Nicholson, "The Eleventh Commandment: Sex and Spirit in Wollstonecraft and Malthus," *Journal of the History of Ideas* 51, no. 3 (1990), 409. However, Nicholson wrongly extended the more late eighteenth-century attitude, "Sex is for reproduction, not pleasure," to encompass the entire century.

⁹⁸ Boerhaave, *Academical Lectures*, 5:126. Others disagreed with Boerhaave's description of the ovaries as the source of female desire. The author of *Aristotle's Last Legacy* asserted that the clitoris "is the Seat of Venereal Pleasure, and gives Women delight in the Act of Copulation; for without this a Woman neither desires Coition, nor hath Pleasure in it, nor conceives by it." *Aristotle's Last Legacy* (London, 1749), 10.

⁹⁹ Mary McApllin, *Female Sexuality and Cultural Degradation in Enlightenment France: Medicine and Literature* (Farnham: Ashgate, 2012), 1-2.

¹⁰⁰ Swammerdam described how the snail "rests quietly without much creeping, until the furious lust of generation gathers new strength, and effaces the memory of the uneasiness suffered after the former coition." Swammerdam, *Book of Nature*, 59. How lust impairs mental operations is more finely articulated by Willis, and worth quoting here at length: "Yea it is thought, that it doth sometimes snatch the Animal Spirits from the Brain it self, which it bestows on the Genitals, in the Act of Venery: For it appears so, when by immoderate Venery, the Brain presently labours with a want of Spritis; for as much as from thence there is no passage for them, to the Spermatick Vessels, but by the Blood; if that the Animal Spirits superabound with a Prolifick Humour, Swelling up within the Genital Parts, presently the whole Corporeal Soul, as it were incited, to the begetting of a young one, is

As suggested by the story of the castrated German girl, anatomy and physiology designated genitalia, even non-sensory genital organs, as sources of pleasure and desire. This relationship, however, was increasingly articulated as directly reliant on nerves, rather than the older and vaguer schemes of heats, passions, sympathies, or vapours. In the late seventeenth century, Pechey suggested “those, who have hot Testicles, are more salacious and prone to venereal actions.”¹⁰¹ The use of heat to denote intrinsically wanton dispositions of body parts was almost completely replaced by nerve theory. A few decades later, physicians such as Stephen Freeman would suggest that the “the principle seat of pleasure” was particularly “interwoven with nerves.”¹⁰² These nerve-based explanations of pleasure followed Willis’s system, wherein “the Activity, or the lively unfolding of the Spirits (which is the Effectress of Pleasure)” occurred when any “Organ of Sense puts forth Desires, peculiar and proper to themselves.”¹⁰³ These desires from organs of sense were classified as “Luxury, or Lust.”¹⁰⁴ Willis’s attention to nervous qualities and Pechey’s designation of testicles as special sources of lust became combined in later physiologies.¹⁰⁵

The writer of the 1742 *A Philosophical Essay on Fecundation* described how “in the Act of Copulation, when the Plot thickens, and Bliss is in its *Zenith*, or meridian Height, ’tis the possible, and very probably, that the Testicles or *Ovaria* may be considerably dilated, by the Rarefaction and Expansion of their own innate *Aura* or Spirit.”¹⁰⁶ Spirits in the gonads now incited pleasure and carnal passion. Notably, a different term had been introduced for male testes and female ovaries, although this author put them on equal footing. This author

inclined to Concupiscence or Lust: The Incentives of Lust, even against the Mind, are sought for, and they are lay’d hold on, however brought by any Sense; the Blood boils up, the Marrow in the Back grows hot, the Eyes are inflamed, the Genitals are inflated, so that there wants little (unless Reason coming between recalls her, and Prohibits here from the Beastliness of it) but that the whole Corporeal Soul, on every occasion, should be dissolved in Lust.” Thomas Willis, *Two Discourses Concerning the Soul of Brutes which is that of the Vital and Sensitive of Man* (London, 1683), 55.

¹⁰¹ Pechey, *Compleat Midwife’s Practice*, 11.

¹⁰² Freeman, *A New Essay*, 24. Boerhaave likewise described how “the spongy Substance of the Urethra which forms the Glans, is covered externally with an exceeding thin Membrane or Cuticle, under which are placed the very sensible nervous Papillæ, which are the chief Seat and Cause of Pleasure and Pain in this Part.” Boerhaave, *Academical Lectures*, 77. This nervous sympathy regarding sexual pleasure was also detailed in females: “divers little Nerves that are knit and entwined in the Form of a Net, and extended to the *Pudenda*, placed chiefly for Sense and Pleasure, moving by way of Sympathy between the Head and the Womb.” *Aristotle’s Last Legacy*, 16.

¹⁰³ Willis, “Two Discourses concerning the Soul of Brutes,” in *Dr. Willis’s Practice*, 52.

¹⁰⁴ *Ibid.*

¹⁰⁵ Until the mid-eighteenth century both males *and* females had “testicles.” The term “ovary” was only introduced by Neils Stensen in the late seventeenth century; it took about a century longer before it really caught on among anatomists. Until then, the synonymous terms “stones” and “testicles” applied equally to the reproductive organs of both sexes.

¹⁰⁶ *A Philosophical Essay on Fecundation: Or, an Impartial Inquiry into the First Rudiments, Progression and Perfection, of Animal Generation ...* (London, 1742), 15-6.

portrayed male and female gonads as similar sources of pleasure; yet, not all authors partitioned pleasure so fairly. *Aristotle's Last Legacy*—one version of the iconic and widely circulated domestic manual, *Aristotle's Masterpiece*—observed that “Pleasure and Delight, say they, is double in Women to what it is in Men; for as the Delight of Men consists in Copulation, chiefly in the Ejection of the Seed; so Women are delighted both by the Ejection of their own and the Reception of Men’s.”¹⁰⁷ Again, this analysis of pleasure took into account the notion that contact with seed conferred pleasure. The difference in pleasure reflects a gender debate about whether one sex or both sexes contribute seed in procreation.¹⁰⁸ Until the later eighteenth century, most physiological discussions suggested both sexes were normally prone to an abundance of sexual pleasure and desire. Contrary to the argument made by Barker-Benfield, the physiology of nerves and the mental/physical susceptibilities associated with sensibility were typically described as affecting both sexes until later in the century. Sexual pleasure was also understood to impair reason for both sexes. Many medics believed females and males had similar experiences with sensations and thoughts because there was a universal nerve anatomy.

In both sexes, sexual pleasure could also originate with the higher faculties, or from the superior side of the sensorium, and be sent down to the genitals.¹⁰⁹ Willis contemplated where pleasures and desires emanated from when no physical senses were excited. He concluded that these were cerebrally inspired: “The active Powers of this Soul, *viz.* Local Motion, Memory, Phantasie, and Appetite follow sometimes immediately the Passions, sometimes are induced apart from them.”¹¹⁰ Although these soul-born pleasures were of a different kind than those inspired by the senses as they caused “a peculiar satisfaction,”¹¹¹ they too were manifest in nerves and spirits. Locke’s empiricist philosophy accounted for these two origins of sensations too: “There are pleasures and pains both of the senses and of reflection.”¹¹² Passions, whether originated in the mind or senses, became manifest on the body as socially, and literarily,¹¹³ important expressions.¹¹⁴

¹⁰⁷ *Aristotle's Last Legacy*, 25.

¹⁰⁸ For discussion about seed theories, see chapter one.

¹⁰⁹ For the discussions in eighteenth-century erotic literature about whether pleasure derived from the mind or body, see Karen Harvey, *Reading Sex in the Eighteenth Century: Bodies and Gender in English Erotic Culture* (Cambridge: Cambridge University Press, 2004), 202-205.

¹¹⁰ Willis, “Of the Anatomy of the Brain,” in *Dr. Willis's Practice*, 79. Willis further explained that “no object makes a more pleasing impression, than that which excites in the fibres of the brain, such vibrations as correspond with those of the soul.”

¹¹¹ Pouilly, *Theory of Agreeable Sensations*, 106.

¹¹² A. J. Pyle, *Locke* (Cambridge: Polity Press, 2013), 48.

¹¹³ See Anne C. Vila, *Enlightenment and Pathology: Sensibility in the Literature and Medicine of Eighteenth-Century France* (Baltimore: Johns Hopkins University Press, 1998), 158-9.

Sexual feelings and passions derived from the mind and soul were also incorporated into the physiology of generation. Marten asserted that “the Imagination is fir’d by Amorous Thoughts, [which sends] the Passion stirring up and rarifying the *Seed*.”¹¹⁵ Anatomists endeavored to “trace out that particular part of the brain which is the seat of pleasure and pain.”¹¹⁶ In 1736, the philosopher Louis-Jean L vesque de Pouilly wrote the original French version of *The Theory of Agreeable Sensations*, in which he reasoned that the seat of pleasure in the mind

must have solidity and strength, since the characters imprinted there cannot be worn out for a space of years. This nervous membrane must hold and touch the extremity of every nerve pertaining to sensation, in order to receive all the different impressions of it. It must at the same time have a power over the origin of every nerve subservient to motion, to be able to communicate such motions as are suited to the vibrations which it feels.¹¹⁷

The author, therefore, concluded that the part in question must be the pia mater, a thin layer of meninges covering the brain.¹¹⁸ Although on the following page he admits his uncertainty, his criteria for the seat of pleasure are telling. That the seat of pleasure in the mind must affect every nerve of sensation and motion reflected the all-encompassing domain of pleasure over the body.

Mutual sympathy caused by pleasure, as well as pain, explained how the material body and immaterial will related—sympathy through nerves and animal spirits unified the person. The cause and effect of sensations and thoughts or behaviours became understood especially in terms of animal spirits. Again, these concepts were most apparent with sexual sensations. In *Theory of the Human Mind*, Hartley’s section “Of the desires of the sexes towards each other” argued that “when a general pleasurable state is introduced into the body, either by direct impressions, or by associated influences, the organs of generation must sympathize with this general state.”¹¹⁹ The implication of Hartley’s assertion is that the seat of pleasure—the genitalia—participated in all bodily pleasure, whether that pleasure originated from sensations or the mind. He pursued this sexual sympathy further by detailing how pleasurable feelings in the organs of generation “rise above indifference into the limits of pleasure from youth, health, grateful aliment, the pleasures of imagination, ambition, and

¹¹⁴ See Paul Goring, “Spectacular Passions: Eighteenth-Century Oratory and the Reform of Eloquence,” in *The Rhetoric of Sensibility in Eighteenth-Century Culture* (Cambridge: Cambridge University Press, 2005), 31-59.

¹¹⁵ Marten, *Gonosologium Novum*, 6-7.

¹¹⁶ Pouilly, *Theory of Agreeable Sensations*, 108.

¹¹⁷ *Ibid.*, 108-9.

¹¹⁸ *Ibid.*

¹¹⁹ Hartley, *Theory of the Human Mind*, 1:86.

sympathy, or any other cause, which diffuses grateful vibrations over the whole system.”¹²⁰ Regardless of its origin, a pleasurable sensation below the sensorium was necessarily felt in the seat of pleasure, the groin. This close sympathy of feeling was the basis for much medical and moral advice in the eighteenth century.

Moral-Medicine and Sexual Sensations

The late seventeenth-century discourse about both the physiological and philosophical effect of bodily pleasure and pain on mental processes became a focus within the culture of sensibility. Accordingly, many medical advice and conduct literature writers similarly referred to the psychosomatic paradigm of sensibility in advancing their recommendations about lifestyle. Very often, such recommendations were made on both medical and moral grounds. These moral-medical writers frequently explored sexual issues and often referred to the notion that sensations negatively influenced reason. Moral-medical literature used the notion of pain and pleasure as punishment and reward, with the most poignant example of submitting to the flesh being illicit sex. Although eighteenth-century discussions often distanced religious morality from the internal conflict between body and soul, the topic of sex unfailingly evoked a religious tone. Sexual sensations, desires, and passions needed to be controlled in order for healthiness. As Faramerz Dabhoiwala has rightly indicated about the pre-modern era, “the mental and physical government of fleshly appetites was the very foundation of the whole culture of discipline.”¹²¹ Within the culture of sensibility, control of sexual sensations and inclinations involved regulating both one’s mind and surroundings. Warnings about sexual feelings and desires, and recommendations to control them, were made in reference to the physiology of nerves, and especially animal spirits. Of the many dangers represented by sexual indulgence, those relating to the mind were most concerning.

This promotion of self-mastery applied also to sex within marriage, which institution was itself a form of sexual and reproductive control.¹²² Only within the sure confines of matrimony, general opinion held, were sexual pleasures licit, controlled, healthy, and ultimately beneficial. Yet, even within marriage, sexual indulgence needed moderation. However, commenting on eighteenth-century sexual advice manuals, Roy Porter emphasized their pro-nuptial themes but noted that marriage “was not presented as a means of taming the flesh,” although it was widely depicted as beneficial to health, fertility, and even pleasure.¹²³ These widely acknowledged precepts about sexual restraint regularly met or came with a more casual acceptance of the lewder side of society and individuals. Take,

¹²⁰ Ibid.

¹²¹ Dabhoiwala, *Origins of Sex*, 27.

¹²² Ibid., 220-2.

¹²³ Roy Porter and Lesley Hall, *The Facts of Life: The Creation of Sexual Knowledge in Britain, 1650-1950* (New Haven: Yale University Press, 1995), 43.

for instance, *Conjugal Love Reveal'd; In the Nightly Pleasures of the Marriage Bed, and the Advantages of that Happy State*, which was a translation of the seventeenth-century French physician and Professor of Anatomy and Surgery at La Rochelle, Nicolas Venette's prolific text on sex and generation. This licentious book, originally published in 1686 under a pseudonym, postured as a morally sound text that promoted only procreative sexual acts within Christian marriage.¹²⁴ Yet, both the author and reader were aware of the book's more prurient side. Often connected with the moral-medical concerns about sexual sensations were a curiosity and recognition of their almost universal influence.

Excessive venery and masturbation were frequently cited concerns by physicians.¹²⁵ The relationship between habitual ejaculation and mental deficits was widely affirmed. As Laqueur has illustrated, individuals like Marten exploited medical jargon and body economics to sensationally decry masturbation.¹²⁶ Moral-medicine, as Laqueur has called it, defined the Georgian onanism movement.¹²⁷ Individuals such as Marten and Samuel-Auguste Tissot used medical theories that connected mental and genital activities to condemn masturbation. *Onania*-type texts linked the soul, genitalia, and pleasure to explain how self-gratification impaired both spiritual well-being and bodily health. For example, the prefatory poem to *A Short Treatise on Onanism* emphasizes these medical connections between nerves, pleasures, ejaculation, and ill-health.

*Physicians are agreed that Copulation,
When age adult, and high-brac'd nerves invite,
Shou'd neither be immoderately desired,
Nor dreaded to excess. The good old man
Is by his tame frigidity admonished,
Not to engage in the dull drudgery,
Mistaken for enchanting scenes of pleasure;*

¹²⁴ Nicolas Venette, *Conjugal Love Reveal'd; In the Nightly Pleasures of the Marriage Bed, and the Advantages of that Happy State*, 7th ed. (London: Tho. Hinton, [1720?]).

¹²⁵ According to Pechey, "the great weakness, and enervation that is induced upon the Brain, and Nerves, by too great an use of Venery." Pechey, *Compleat Midwife's Practice*, 8. Albrecht von Haller suggested that coition "is a very violent action, which borders upon convulsion, and which thereby surprisingly weakens, and prejudices the whole nervous system." Samuel Auguste David Tissot, *Onanism: or, a Treatise upon the Disorders Produced by Masturbation*, trans. A. Hume (London, 1766), 58, quoting Haller.

¹²⁶ According to Laqueur, the anonymous author of the popular anti-self-pollution treatise *Onania* was none other than Marten. Tissot's introduction to his influential treatise, *Onanism*, reads: "My design was to write upon the disorders occasioned by masturbation, or self-pollution, and not upon the crime of masturbation: besides, is not the crime sufficiently proved, when it is demonstrated to be an act of suicide?" (vii-viii). See Thomas Laqueur, preface to *Solitary Sex: A Cultural History of Masturbation* (New York: Zone Books, 2003).

¹²⁷ Foucault described how "sexual austerity" was connected with wider philosophical, social, cultural, or political concerns. Foucault, *History of Sexuality*, 2:23. For a discussion of moral-medicine, see Laqueur, *Solitary Sex*.

*Lest thus he snap his feeble thread of life,
 But what more base, more noxious to the body,
 Than by the power of fancy to excite
 Such lewd ideas of an absent object,
 As rouse the organs form'd for nobler ends,
 To rush into th' embraces of a phantom,
 And do the deed of personal enjoyment!*¹²⁸

The anti-masturbation movement particularly instances how physiological precepts about nerves linking the organs of generation to the mind inspired social discussions about sexuality within eighteenth-century print, medical, and sensibility cultures.¹²⁹ In fact, the anti-masturbation discussion depended on the idea that the brain and genitalia similarly used and affected the same nervous fluid. Without that direct physiological connection, the medical arguments against self-gratification would have been much less convincing.

This eighteenth-century blend of morality and medicine harked back to Willis's occasional theological comments in his physiology treatises. In one such comment, Willis used a pathology trope to discuss the immoral influence of the body on the mind. He described "*the Corporeal Soul doth extend its Sicknesses, not only to the Body, but to the Mind or rational Soul, which is of an higher linage.*"¹³⁰ According to his theories, in the war between lower and higher faculties, the lower corporeal appetites and desires often prompted individuals to behave contrary to social and moral codes. Locke also thought along these lines, but his philosophy gave more attention to the language and ideas of a natural morality.¹³¹ Both Willis and Locke described how indulging in instantaneous gratifications often followed from a failure of reason and led to a fall into vice. In the stripped down, more accessible, and more sensational medical advice literature that followed during the eighteenth century, indulging in pleasures often referred to sexual pleasures. The relationship between the body and mind, desire and reason, through sensations and nerves seemed best exemplified by the sexual lifestyles of certain figures, particularly libertines.

Published tracts capitalized on the dire spiritual consequences of indulging venereal desires without the sanctity of the marriage bed. The widely regarded conduct book, *The*

¹²⁸ *A Short Treatise on Onanism; or, the Detestable Vice of Self-Pollution...* (London: printed and sold by Fletcher and Co., 1767), preface.

¹²⁹ See Barker-Benfield, *Culture of Sensibility*, 329-30.

¹³⁰ Thomas Willis, preface to "Two Discourses concerning the Soul of Brutes," in *Dr. Willis's Practice of Physick...* (London, 1684).

¹³¹ The rational soul, according to Locke, expressed a will that equated to "the greater Good." Immorality came from either wrong understanding about how to achieve a permanent state of pleasure or an immediate indulgence of "Corporal and present Pleasure, and to avoid Pain at any rate." Locke, *An Essay*, 124, 127.

Whole Duty of Man (1657, reprinted throughout the eighteenth century), expressed an attitude concerning sexual pleasure and desire typical of the genre:

Men are not to think themselves let loose to please their brutish appetites, but are to keep themselves within such rules of moderation, as agree to the end of marriage, which being these two, the begetting of Children, and the avoiding of fornication, nothing must be done which may hinder the first of these ends; and the second aiming onely at the subduing of lust, the keeping Men from any sinful effects of it.¹³²

As in medical discussions, moral tracts like *The Whole Duty of Man* warned that lust could compel men to brutishness, which destroyed marriages. That trope was used frequently as later writers examined the physiological effects of sexuality on the mind.

Warnings about Sexual Pleasure and Tropes about Lost Reason

Nearly two decades after *Epicurus's Morals* made print in English, Charleton published his *Natural History of the Passions*.¹³³ In that work Charleton described, similarly to Willis, a division and tension between the rational soul and carnal desires. With reference to Willis, Pierre Gassendi, and Epicurus, Charleton postulated “two contrary Appetites or Wills in one and the same Soul, at one and the same time.”¹³⁴ As in Willis’s illustration of two empires at war, Charleton saw the lower, carnal appetites as a negative influence that subverted reason:

When the divine *Politie* of the Rational Soul being subverted, the whole unhappy man is furiously carried away to serve the brutish lusts of the insolent usurper, and augment the triumphs of libidinous carnality: which degrades him from the dignity of his nature, and cassating all his royal prerogatives, debases him to a parity with beasts, if not below them; for, *Reason* once debauch’d so as to become *brutal*, leads to all sorts of *excess*; whereof beasts are seldom guilty.¹³⁵

As in his translation of Epicurus, Charleton alluded to how sexual indulgence leads individuals into a bestial condition. Interestingly, Charleton also examined nerve physiology and viewed pleasure as inherently good, similar to Willis and Locke. Immoderate carnal pleasure, according to Charleton, was a terrible threat to both reason and humanity.¹³⁶ Yet,

¹³² [Richard Allestree], *The Practice of Christian Graces, or, The Whole Duty of Man Laid Down in a Plaine and Familiar Way...* (London: printed by D. Maxwell for T. Garthwait, 1658 [orig. 1657]), 168-69.

¹³³ See Wilson, *Epicureanism at Modernity*, 267-8.

¹³⁴ Walter Charleton, *Natural History of the Passions* (London, 1674), preface.

¹³⁵ *Ibid.*, 58-9.

¹³⁶ See Pouilly, *Theory of Agreeable Sensations*, 83, 155, which also proposes Epicurean philosophy in concert with nerve physiology.

even with this emphasis on sexual moderation, Epicureanism was regularly denounced as promoting libertinism and sexual excess.¹³⁷

The image of people becoming bestial as they yielded to carnal desires was appended to libertines, or “a Man of Pleasure, or a Woman of Pleasure,”¹³⁸ by social and moral critics throughout the period. These licentious figures gained a wide notoriety and appeared in numerous kinds of writings and discussions. Some observers felt that promiscuous types were unavoidable, especially in the British capital. Ryder, for instance, recalled grudgingly keeping the company of “rakes and whores” on a boat ride to Lambeth Wells. He noted that “the men were almost all either such as have nothing else to do but to spend their time this way, as officers of the Guards or young fellows that are glad of every opportunity to gratify their pleasure. . . . Yet the men that were there that seemed to be men of fashion were as familiar with them [the whores] as if they were their equals.”¹³⁹ As Barker-Benfield argues, the topic of libertinism became associated with the culture of sensibility.¹⁴⁰ Certainly, nerves and the sensible body were central ideas for those discussing or criticizing the indulgence of sexual appetites and desires.

One moral critic of libertine attitudes anonymously authored the poem, *The Temples of Virtue and Pleasure* (1742). This poem is an allegorical journey with two paths: one to Virtue’s Temple and the other to Pleasure’s.¹⁴¹ Those who ventured to Pleasure’s Temple found a goddess who embodied the chimerical existence of carnality in humankind:

Here *Lust* attends a Woman to the Waist
Of blooming Beauty, but a Goat the rest;
Her Blood for ever boils with inward Fires,
And from her Eyes dart forth obscene Desires;¹⁴²

From the waist down, bestial urges were physically manifest and emanated upwards, consuming her sense and reason. Such base pleasures morph the indulger into a monster, and such monsters bred horrid and unnatural progeny.

The Goddess once, that look’d so gay and free,
Became a filthy Hagg, *Debauchery*.
Close at her side reclin’d, her daughter *Pain*

¹³⁷ For an account of Robert Boyle’s criticism of libertines who assumed “the *Epicurean* or other *Mechanical Principles of Philosophy*,” and, ironically, others’ criticisms of Boyle for being an Epicurean, see Wilson, *Epicureanism at Modernity*, 227.

¹³⁸ James Boswell, “On Pleasure,” In *Boswell’s Column*, ed. Margery Bailey (London: William Kimber, 1951), 212.

¹³⁹ Ryder, *Diary of Dudley Ryder*, 57. Wilson, *Epicureanism at Modernity*, 230. According to Wilson, after the Restoration many “English aristocrats faced a crisis of occupation. . . without military affairs to occupy them,” so they took up recreational and libertine pursuits.

¹⁴⁰ Barker-Benfield, *Culture of Sensibility*, 38.

¹⁴¹ *The Temples of Virtue and Pleasure* (London, 1742), 2.

¹⁴² *Ibid.*, 7.

Bemoans her Mother's past Offence in vain;¹⁴³

The figures of Lust, Debauchery, and Pain corresponded to a notable trope wherein sexual immorality was represented as female, reproductive and monstrous. The birthing imagery of Pleasure's Temple has apparent connections with John Milton's depiction of Sin's monstrous birth of hell hounds in *Paradise Lost*.¹⁴⁴ The "unfinish'd Reptiles," "slimy Newts," and "dissolving Lizards" that creep over Lust's body signify further how "obscene Desires" breed unwholesomeness and beastliness. The legacy of choosing a life of pleasures was ultimately pain.

This trope for warning against sexual indulgence was given an even fuller treatment in Edward Young's mid-century tract, *The Centaur not Fabulous* (1755), which he addressed to his friend, Samuel Richardson. By the time *The Centaur* appeared in booksellers' shops, the Oxford-educated clergyman, Young, had already established his literary merit by his many poetic works, the most notable being *The Complaint, or, Night-Thoughts on Life, Death, and Immortality* (1742–6).¹⁴⁵ The premise of Young's tract was a conversation with a centaur, who censured men of pleasure as irreligious and socially harmful. As beasts from the waist down and renown for their fierce and unyielding passions, centaurs were clear analogies for libertines, such as the then recently deceased Lord Bolingbroke, who had been a focus in Young's earlier writings. The narrator expounded, "The *Men of Pleasure*, the licentious, and profligate, are the subject of these Letters; and in such, as in the fabled Centaur, the Brute runs away with the Man: therefore I call them *Centaurs*."¹⁴⁶ Like other criticisms of beaux, fops, rakes, and libertines, Young portrayed these men as ridiculous. Again employing the beast trope, he derided those men for "galloping with more than human haste after temptations; and rather insolently prancing on four legs, than decently content with two."¹⁴⁷ But, more than just satirical jest, portraying men of pleasure as bestial prompted serious philosophical questions; the narrator asks

¹⁴³ *Ibid.*, 11-12.

¹⁴⁴ John Milton, *Paradise Lost*, bk. 2 (London, 1667), 795-799. The seventeenth-century theologian Henry Jeanes likewise described lust as "a teeming mother, now a mother conceiveth inwardly in her wombe, and bringeth forth the fruit; of her wombe out of her body into a world semblably, the conception of sin is inward by delights, desires, and purposes of the heart, the birth of it is outward by words and deeds." Henry Jeanes, *A Second Part of the Mixture of Scholasticall Divinity* (Oxford, 1660), 322. For the gendered meanings of other childbirth and generation tropes in *Paradise Lost* see Corrinne Harol and Jessica MacQueen, "Eve's Labours: Procreation, Reproduction, and the Politics of Generation in *Paradise Lost*," in *The Secrets of Generation: Reproduction in the Long Eighteenth Century*, eds. Raymond Stephanson and Darren Wagner (Toronto: University of Toronto Press, forthcoming).

¹⁴⁵ James E. May, "Young, Edward (*bap.* 1683, *d.* 1765)," *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

¹⁴⁶ Edward Young, *The Centaur not Fabulous: In Five Letters to a Friend on the Life in Vogue* (London, 1755), preface: ii.

¹⁴⁷ *Ibid.*, preface: vii.

whether a man of pleasure would “consider himself as an *immortal* Being? or only as a *rational*? or as a mere *animal*?”¹⁴⁸ These questions concerned the status of being human and whether behaviours, such as over-indulging in pleasure, can change a man into something that is not human. The frequency and strength of this beast trope suggests that such a transformation through debauching in “animal delight”¹⁴⁹ was possible.

Young also raised several concerns about the effect of the “canine appetite.”¹⁵⁰ Using a medical idea, he insinuated that “our Imagination, fir’d by passion, imposes not only on our understandings, but our very senses,”¹⁵¹ which passions contain an “opiate in it; it stupefies and besots.”¹⁵² Another metaphor about noxious substances was used in describing men of pleasure as “not only poisoned, but barbed, arrows, in the British heart.”¹⁵³ Such anxieties about individual and national health were often cited by Young: he called infidelity and carnal pleasure “national distempers,” wherein “One seizes the body; one the mind.”¹⁵⁴ Others too, like the physician-poet, Nathaniel Cotton, feared for national instability from those who recklessly pursued pleasure:

A Satyrist in *Roman Times*,
When *Rome* like *Britain* groan’d with Crimes,
Asserts it for a sacred Truth
The PLEASURES are the Bane of youth:
That Sorrows such Pursuits attend,
Or such Pursuits in Sorrows end:
That all the wild Advent’rer gains
Are Perils, Penitence, and Pains.¹⁵⁵

Such common historical comparisons were as much nationalistic puffery as they were moral caution. However, there were serious concerns about how pleasure plagues the control of individuals and nation states. Young quipped if there was any more increase in libertinism, “where is that Bedlam which can receive a whole nation into proper methods of cure?”¹⁵⁶ Whether in the individual or in the body politic, excessive animal pleasures threatened to disease and cripple rationality and stability.

¹⁴⁸ *Ibid.*, 103.

¹⁴⁹ *Ibid.*, 68-9.

¹⁵⁰ *Ibid.*, 2.

¹⁵¹ *Ibid.*, preface: viii.

¹⁵² *Ibid.*, 66.

¹⁵³ *Ibid.*, 3. Young went on to warn that “if our national distemper, far from being cutaneous at present, should reach the vitals of our State” (60).

¹⁵⁴ *Ibid.*, 3.

¹⁵⁵ Nathaniel Cotton, *Visions in Verse* (London, 1751), 25.

¹⁵⁶ Young, *Centaur not Fabulous*, 2. For a description of how libertines were also depicted as rational and mechanical, yet still disruptive to the body politic, see Muri, *Enlightenment Cyborg*, 178-9.

While his metaphors and censures mirrored those used in Charleton's works, Young wrote vehemently against Epicureanism. He described a near association between libertines, Epicureans, and deists, deriding all three as immoral and unreasoning.¹⁵⁷ He blasted them further as "wanting in Goodness, or Reason" for maintaining such beliefs while living "in a land enlighten'd by the Gospel."¹⁵⁸ Anxious tones about national instability crept into his censures against Epicureanism too: "And such Greeks have we; Epicurean Greeks, subtle, and unbelieving; and whose celebrated writings are of equal authority."¹⁵⁹ Young argued "that all *real* enjoyment lies within the compass of God's commands; which abridge not, but defend them: that when we dip too deep in Pleasure, we stir a sediment, that renders it impure, and noxious: that (as much a paradox as it may seem) the best means of arriving at the true pleasures of the body, is to preserve, and cultivate, the powers of the soul."¹⁶⁰ Of all kinds of ungodly pleasures, sensual pleasures stirred up the greatest filth and were most noxious to the soul.¹⁶¹ According to these censures, men and ladies of pleasure risked forfeiting their reason and morals to animal desires and brutish behaviours. A figure common in sentimental fiction, the rake was defined by Johnson according to such deprecations: "A loose disorderly, vicious, wild, gay, thoughtless fellow; a man addicted to pleasure."¹⁶²

Whether arguing for or against libertinism or Epicureanism, physiological ideas about how pleasure and pain affected bodies and minds were frequently evoked, and these ideas contributed to wider understandings about sensibility.¹⁶³ David Hume's mid-century flowery essay "The Epicurean" emphasized "the fruitless attempts of art... which the severe philosophers have undertaken, the producing of an *artificial happiness*, and making us be pleased by rules of reason, and by reflection."¹⁶⁴ Pleasure, Hume mused, was experienced without having "to regulate, refine, or invigorate any of those springs or principles, which nature has implanted in me."¹⁶⁵ Rather, happiness involved "ease, contentment, repose, and pleasure," which conditions relied upon the proper working of an involuntary physiology: "The stomach digests the aliments: The heart circulates the blood: The brain separates and

¹⁵⁷ Young, *Centaur not Fabulous*, 18.

¹⁵⁸ *Ibid.*, 36.

¹⁵⁹ *Ibid.*, 31. According to Mackenzie's sermon, national corruption derived from the small segment of "enlightened spirits" that live licentious lives. Mackenzie, "Love of Pleasure," 9.

¹⁶⁰ Young, *Centaur not Fabulous*, 68-9.

¹⁶¹ *Ibid.*, 134.

¹⁶² Johnson, *Dictionary*, s.v. "Rake."

¹⁶³ For a discussion of the cult of Platonic love, natural affection, and Epicureanism, see Wilson, *Epicureanism at Modernity*, 269.

¹⁶⁴ David Hume, "The Epicurean," in *Essays: Moral, Political and Literary*, ed. Eugene F. Millar (Indianapolis: Liberty, 1987), 141. See Wilson, *Epicureanism at Modernity*, 37, 277.

¹⁶⁵ Hume, "The Epicurean," 143.

refines the spirits: And all this without my concerning myself in the matter.”¹⁶⁶ Hume described how senses—of the mind and body—worked in concert to create a state of pleasure. However, what remained debated until the culture of sensibility disappeared was a deep anxiety about how those innate and involuntary bodily and mental sensations bred desires, passions, thoughts, and behaviours.

To control sexuality meant controlling one’s thoughts and those external factors that could evoke sexual feelings. When discussing pleasure in his treatise on the nerves, Hartley added a moralizing aside about virtue: “how watchful every person, who desires true chastity and purity of heart, ought to be over his thoughts, his discourses, his studies, and his intercourses with the world in general, and with the other sex in particular.”¹⁶⁷ Hartley’s sage advice highlights the ways in which people susceptible to licentious feelings can regulate their lives. In particular, imagination, conversation, reading, and social settings were seen as entry points for externalities to inspire lewd sensations and desires. However, Hartley allowed that sexual pleasure was not all bad.

Health Benefits from Sexual Pleasure

Sexual pleasure was also acknowledged as both crucial for generation and necessary for good health. Willis thought along these lines when he described a particularly pro-nuptial pathology.¹⁶⁸ He suggested that “a Cause of the Hysterical Passions in Maids and Widows” was an “untimely restraint of the Seminal Humour, which ought to be bestowed about the Pleasure of *Venus*; at least, if they receive help from the state of a Conjugal Life.”¹⁶⁹ This backlog of seminal humour caused “Restagnations of the Nervous Humour, which often fix a Taint to the Brain and Nervous stock.”¹⁷⁰ The diagnosis corresponded with a long tradition about greensickness in maids and spinsters, and the benefits of conjugal life.¹⁷¹ In Willis’s account, pleasure was typically a *result*, rather than catalyst, of healthiness. Hartley’s comment about the “limits of pleasure from youth, health, grateful aliment” indicated this correlation between pleasure and general well-being.

However, by the mid-eighteenth century, several authors argued that pleasure *caused* good health. Many authors affirmed the simple, proverbial notion that happiness led to healthiness. In his examination of the passions, Charleton repeatedly observed that pleasing emotions, such as joy, involved a healthy circulation of the animal spirits whereas displeasing emotions, such as anger, involved violent and detrimental agitations of those

¹⁶⁶ Ibid.

¹⁶⁷ Hartley, *Theory of the Human Mind*, 1: 89.

¹⁶⁸ Porter and Hall described how “from the seventeenth century, marriage recurs as a central element in discussions of sexuality.” *Facts of Life*, 227.

¹⁶⁹ Willis, “Of Convulsive Diseases,” in *Dr. Willis’s Practice*, 73.

¹⁷⁰ Ibid.

¹⁷¹ See the discussion of greensickness in chapter four; see also Helen King, *The Disease of Virgins: Green Sickness, Chlorosis and the Problems of Puberty* (London: Routledge, 2004).

spirits.¹⁷² Stating it plainly, Hartley wrote, “A disposition to a pleasurable state is a general attendant upon health.”¹⁷³ The reverse was also held to be true; health was dependent on experiencing pleasure. Pouilly suggested that “pleasure presents herself in order to incite the mind to a proper exercise, and keep her from falling into a state of fatal inactivity.”¹⁷⁴ Without adequate pleasure to exercise the mind, people “must inevitably sink into a deplorable state of insensibility and languor.”¹⁷⁵ Pouilly further described how pleasure “exercises the fibres of the brain without weakening or exhausting them; on the other hand, whatever is displeasing wounds them, and whatever is tiresome leaves them in a state of inactivity.”¹⁷⁶ In this manner, pleasure and pain left their memory on people’s minds, personalities, and constitutions. Near the end of the century, a translation of Joseph-Adrien Lelarge de Lignac’s treatise on marriage professed a hodgepodge of old and new physiological ideas and medical maxims. In reference to the health benefits of sexual pleasure, Lignac suggested, “Pleasure, when used with moderation, is undoubtedly one cause that concurs to the maintenance of health: a super-abundance of the prolific liquor in a vigorous man, at the prime of his life, molests the functions, and even affects the spirits, if this man obstinately continues in a celibate condition.”¹⁷⁷ However, pleasure was not always good for health.

Health Problems from Sexual Indulgence

When sexual desires overwhelmed individuals and moderation was lost, sexual indulgence could adversely affect the animal spirits, leading to mental and bodily problems. Venette warned about women who give “too great a loose to their desires in conjugal embraces.”¹⁷⁸ Such frequent acts meant “the animal spirits are exhausted,” which state made those women “thoughtful, and dronish, their hair become thin, and their complexion yellow.”¹⁷⁹ Too much pleasure had deleterious effects that could “impair and destroy our

¹⁷² Charleton, *Natural History*.

¹⁷³ Hartley, *Theory of the Human Mind*, 2: 257.

¹⁷⁴ Pouilly, *Theory of Agreeable Sensations*, 24-5.

¹⁷⁵ *Ibid.*, vii-viii.

¹⁷⁶ *Ibid.*, 97.

¹⁷⁷ Louis François Luc de Lignac, *A Physical View of Man and Woman in a State of Marriage*, trans. from French (London, 1798 [first published in France in 1774]), 2: 4. See Michael Winston, “Medicine, Marriage, and Human Degeneration in the French Enlightenment,” *Eighteenth-Century Studies* 38, no. 2 (2005): 263-83. Winston describes, “Lignac’s reservations concerning monastic/convent life derive in part from the belief that prolonged retention of seminal fluid has a deleterious effect on the animal economy. In order to support this contention, Lignac provides numerous examples of death and disease resulting from semen retention” (276).

¹⁷⁸ Nicolas Venette, *Conjugal Love; or, the Pleasure of the Marriage Bed...*, 20th ed. (London, 1750), 48. Quoted in Porter and Hall, *Facts of Life*, 86.

¹⁷⁹ *Ibid.*

organs.”¹⁸⁰ The idea of sexually pleasuring another person, or one’s self, was sometimes written about in association with health concerns since the seventeenth century.¹⁸¹ In the eighteenth century, too much pleasuring became a concern that was widely written about. Cheyne’s influential *An Essay of Health and Long Life* (1724) declared that the passions “have a greater Influence on *Health and Long Life*, than most People are aware of.”¹⁸² He warned that long or chronic passions result in “overworking some Part of the *nervous System*” that would eventually “impair the Habit.”¹⁸³ Again, physiological memory was involved; when a person frequented a passion such as pleasure too often, it would “beget a ready Disposition in the *Nerves* to produce again the same.”¹⁸⁴ The fearful consequence, as Cheyne explained, was a too ready disposition in the nerves. This disposition meant the human “*Machine* performs without the Consent of the *Will*.”¹⁸⁵ Health and volition became sacrificed to excess pleasure.

Concerns about the lost control over the body following too much sexual activity was a central topic in the physician-poet John Armstrong’s *The Oeconomy of Love*. This extended verse offers medical advice on sexual matters, with particular warnings against excessive ejaculation. Armstrong warned of “the dire Effects / Of Use too frequent”¹⁸⁶ using the language of nerve physiology. He suggested that too much sexual indulgence left “a Load of unobedient Limbs,” “slacken’d Nerves,” and impotence.¹⁸⁷ Overusing sex for a “trite Embrace / Follow faint Relaxation, Strength impair’d, / Disgust, and mutual Apathy, Love’s Bane.”¹⁸⁸ Such physical repercussions, Armstrong exhorted, would destroy marriages. Too much sexual pleasure led to exhaustion, and was just as inclement to health and well-being as pain. These troubling consequences provided Cleland with one of the more distinct characters in his *Fanny Hill*, the oversexed Mr. Norbert. *Fanny Hill* was more sophisticated than a mere book of erotica; it presented serious philosophical views about sex, which frequently referred to physiological principles.¹⁸⁹ The case of Mr. Norbert was a caveat about sexual over-indulgence: “At scarce thirty, he had already reduced his strength

¹⁸⁰ Pouilly, *Theory of Agreeable Sensations*, vii-viii.

¹⁸¹ According to the *Oxford English Dictionary*, the verb sense of “pleasure” with sexual connotations began in the seventeenth century.

¹⁸² Cheyne, *Essay of Health*, 144.

¹⁸³ *Ibid.*, 156.

¹⁸⁴ *Ibid.*, 157.

¹⁸⁵ *Ibid.*

¹⁸⁶ Armstrong, *Oeconomy of Love*, 13.

¹⁸⁷ *Ibid.*, 23. Foucault discussed eighteenth-century concerns about seminal weakness and consequent changes in body habit. Foucault, *History of Sexuality*, 2:15.

¹⁸⁸ Armstrong, *Oeconomy of Love*, 24.

¹⁸⁹ For the significance of materialism in *Fanny Hill*, see Leo Braudy, “*Fanny Hill* and Materialism,” *Eighteenth-Century Studies* 4, no. 1 (1970): 21-40. See also Andrea Haslanger, “What Happens When Pornography Ends in Marriage: The Uniformity of Pleasure in *Fanny Hill*,” *ELH* 78, no. 1 (2011): 163-88.

of appetite down to a wretched dependence on forced provocatives, very little seconded by the natural powers of a body jaded and wracked off to the lees by constant repeated overdrafts of pleasure, which had done the work of sixty winters on the springs of life.”¹⁹⁰ As a whole, *Fanny Hill* presents sexual indulgence and pleasure in a very positive light; however, Cleland did warn of the dangers of excessive pleasure. For Mr. Norbert, the consequences were as Cheyne would have described—a depletion of appetite, an enfeebled habit, and a terrible shortening of life. Of those who were “enervated by nature, debaucheries, or age,”¹⁹¹ Mr. Norbert was the second. According to Fanny, he suffered from a “short-lived erection, he would perhaps melt it away in a washy sweat, or a premature abortive effusion, that provokingly mocked my eager desires; or, if carried home, how faltered and unnervous the execution! how insufficient the sprinkle of a few heat-drops to extinguish all the flames he had kindled.”¹⁹²

Partly to paint a licentious work with a splash of virtue, and partly to recite accepted notions about health and sex, Cleland added some of his own warnings at the end of *Fanny Hill*. One relates to the case of Mr. Norbert, “Thus temperance makes men lords over those pleasures that intemperance enslaves them to: the one, parent of health, vigour, fertility, cheerfulness, and every other desirable good in life; the other, of diseases, debility, barrenness, self-loathing, with only every evil incident to human nature.”¹⁹³ In the same vein as this moral, Mr. Norbert grew “more delicate, more temperate, and all in course more healthy” through Fanny’s moderating his sexual excesses.¹⁹⁴ Regardless of the success of Mr. Norbert’s new moderate sexual regimen, it was too little, too late, and he dies as a consequence of his over-indulgent youth. Cleland’s interest in medicine shines through these lines.¹⁹⁵ He would later publish two medical works, *Institutes of Health* (1761) and *Physiological Reveries* (1765), and claim that he “understood the nerves better than any doctor in Europe.”¹⁹⁶ These medical ideas when blended with morality reflect an eighteenth-century trend toward moralistic medical advice about sex. The anxieties about the power of pleasure that arose time and again in eighteenth-century moral-medical writing also arose in literature of sensibility.

¹⁹⁰ John Cleland, *Fanny Hill; or Memoirs of a Woman of Pleasure*, ed. Peter Wagner (London: Penguin, 2001 [orig. 1748-9]), 170.

¹⁹¹ *Ibid.*, 176.

¹⁹² *Ibid.*, 176-7.

¹⁹³ *Ibid.*, 223.

¹⁹⁴ *Ibid.*, 179.

¹⁹⁵ For Cleland’s medical interest, see William H. Epstein, *John Cleland: Images of a Life* (New York: Columbia University Press, 1974), 119, 171, 173, 176.

¹⁹⁶ Quoted in *Oxford Dictionary of National Biography*, s.v. “John Cleland.” Quoting James Boswell, *Boswell, Laird of Auchinleck, 1778-1782*, eds. J. W. Reed and F. A. Pottle, (New York: McGraw-Hill, 1977), 77.

Sexual Pleasure and Pain in Literature

Many authors of sentimental fiction wove ideas about how sexual sensations affected individuals' thoughts and choices into romantic plots. Satirists poked holes in the presumptions other authors made about how sexual feelings upset mental reason and represented a menacing danger. But regardless of the kind of attention given, the idea that sensations experienced by sensible bodies travelled via nerves and altered the mind was important. And never was that idea more important than when sexual sensations were concerned. John Sutton notes that there was an "ancient association between reproduction and reasoning."¹⁹⁷ However, within the eighteenth-century milieu and in understandings of nerves and sensibility, concerns about how sexuality and generation affected reasoning became especially momentous.

Early in the eighteenth century the writer and politician Anthony Ashley Cooper, 3rd Earl of Shaftesbury, asked in his treatise *Characteristicks of Men* (originally published in 1711), "Can there be *Strength of Mind*; can there be *Command over one's self*; if the Ideas of Pleasure, the Suggestions of *Fancy*, and the strong Pleadings of Appetite and Desire are not often withstood, and *the Imaginations* soundly reprimanded, and brought under subjection?"¹⁹⁸ The idea that virtuous character derived from mental mastery over bodily sensations and desires often arose in literature of sensibility. One example is Samuel Richardson's character Pamela, whose chastity and resolution are repeatedly tried and fortified throughout the novel. Even when the marks of interest or arousal are evidenced by her blushing and excited responses, her repeated and staunch resistance of illicit sexual pleasure reinforce her virtuous character. Yet, many critics and satirists felt that view of experience, self-control, and virtue was too obvious and simple. Several narratives intentionally subverted that view. One such subversion of Richardson's literary portrayal is Henry Fielding's *An Apology for the Life of Mrs. Shamela Andrews* (1741). Equating pleasure and pain to good and bad or to punishment and reward, as Locke had described, became a theme regularly employed and complicated in sentimental fiction and depictions of sensibility.

In the mid-eighteenth century, Samuel Johnson eulogized Sensibility:

THOU, Sensibility, art also *there*;
The priestess of the shrine, infusing deep,
Through all the mental powers thy soft control.
Study through thee by lively taste refin'd
The quick perception knows, and glowing thought;

¹⁹⁷ Sutton, *Philosophy and Memory Traces*, 43.

¹⁹⁸ Ashley Cooper, *Characteristicks of Men*, 312.

Through thee warm Fancy dares a bolder flight,¹⁹⁹
 Sterne also penned a dedication praising Sensibility as a positive and powerful force, which moved people's minds and bodies.²⁰⁰ Remarkably similar eulogies were also written to Pleasure. Even Young's *The Centaur* includes an example: "Oh, *Pleasure! Pleasure!* what art thou? The death of Reason. And with Reason dies the whole Heaven, as well as Character, of man."²⁰¹ The same sense of internal and mysterious power over the mind is evoked in Young's lines as in Johnson's. And portending Sterne's description of sensibility as the "eternal fountain of our feelings," Young wrote, "O Thou! whose Omnipotence is but a *second* attribute, and a proper servant to thy delight. Thou great Fountain of *Pleasure!* as *such* I adore thee."²⁰² Young called these lines "The Profligate's Prayer," which he intended to shock the reader with their dissolute attitude.

This intention aside, these eulogies reveal some of the several ways in which sensibility and pleasure were connected. Both eulogies were adapted for similar literary themes and treatments. Both highlight the relationship of the mind and body, emphasizing the power of sensation. Pleasure, like sensibility, represented a convincing motivation for change in individuals' thinking and behaviour. Writers pondered how pleasure affected the sensible, particularly among their own vocation. As the poet William Cowper observed in a letter to Joseph Hill, other poets "write when the delightful Influences of fine weather, fine prospects, and a brisk Motion of the Animal Spirits, make poetry almost the Language of Nature; and I, when Iceicles descend from all the Leaves of the Parnassian Laurel."²⁰³ Pleasure generally was inspirational to the sensible. When depicting both pleasure and sensibility, literary authors deployed a similar register of dramatic gestures or symptoms. A final significant literary connection is that fiction about sensible characters often used sexual pleasure as a particular plot device, specifically a bildungsroman-type narrative of sexual development toward self-awareness.

These literary similarities between sensibility and pleasure reflected their shared physiological basis. Emphasizing this shared physiology, Johnson's poem introduced its theme as follows: "Sensibility, or that frame of Mind, by which we have a quick and intimate feeling of every Object, the perception of contemplation of which is productive

¹⁹⁹ Samuel Johnson, the argument to *Sensibility; a Poem* (London, 1774), 34.

²⁰⁰ For Sterne's eulogy to Sensibility, see this chapter's introduction.

²⁰¹ Young, *Centaur not Fabulous*, 188. Written decades earlier, John Wilmot's poem "A Ramble in St. James's Park" came to a remarkably similar conclusion, although one which clearly concerned sexual pleasure and expressed more relish than lament: "And reason lay dissolved in love" (18). John Wilmot, Earl of Rochester, "A Ramble in St. James's Park," in *Poems on Several Occasions...* (Antwerpen: [s.n., 1680?]).

²⁰² Young, *Centaur not Fabulous*, 184.

²⁰³ Letter from William Cowper to Joseph Hill, 9 May 1781, retrieved from *Electronic Enlightenment*.

either of Pleasure or of Pain.”²⁰⁴ His poem continues with a series of vignettes, in which circumstances of pain or pleasure provoke characters to extraordinary responses and actions. Commonly, pain and pleasure, especially of a sexual kind, motivated a character through the loss of reason. Behaviours following this loss were portrayed as extraordinary and often antisocial or immoral. Through association with these motivations of pleasure, literature of sensibility was often viewed as licentious.

Furthering this association were the shared gestures and symptoms that pain and pleasure had with sensibility. As I have argued, animal spirit theories are fundamental for interpreting the actions, gestures, and responses of sentimental characters. Whether Harley’s heart-wrung demise at the moment Miss Walton promises her love, Joseph Andrew’s irrepressible weeping fit as his beloved Fanny is stolen from him, or Mr. B’s passionate rages toward the comely but unattainable Pamela, desire for sexual pleasure was often evidenced by sentimental gestures. Through nerves coursed the impetus behind dramatic emotional displays, like fits, weeping, or outbursts, as well as the fine experiences pressed onto the sensible mind, causing empathy, tears, blushes, and sighs. As Ann Jessie Van Sant has argued, writers of sensibility struggled with “the impossibility of direct access to thoughts and emotions.”²⁰⁵ Physical gestures linked directly to the mind by nerves made that access possible.²⁰⁶ Whether those gestures revealed sympathetic feelings or personal distress, those gestures had high value in that culture.²⁰⁷ Genitalia and sexual pleasure hugely influenced the spirit economy and nervous system and, therefore, hugely affected understandings and displays of sensibility and sentimentality. Those types of people who were especially sensible were also inclined to feeling pleasure and pain more intensely.

These connections between sensibility, pleasure and pain were most thoroughly explored in mid-eighteenth-century erotic literature. In the 1740s, Epicurean ideas were adapted to suit new literary visions of sexual freedom.²⁰⁸ Erotic literature retained Epicurean goals of obtaining pleasure, but also adjusted Epicurus’ stance on sexual pleasure to allow for greater liberality. Erotic writings, particularly the central work examined in this section, *Fanny Hill*, constituted an important sub-genre of literature of sensibility. In a broader sense, literature of sensibility explored the manner in which the physiological conflict between carnal desires and the rational mind was enacted in individuals and society. Essentially,

²⁰⁴ Samuel Johnson, the argument to *Sensibility; a Poem* (London, 1774).

²⁰⁵ Ann Jessie Van Sant, *Eighteenth-Century Sensibility and the Novel: The Senses in Social Context* (Cambridge: Cambridge University Press, 1993), 61.

²⁰⁶ Barker-Benfield suggests that these emotional gestures required a “finer nerve structure.” Barker-Benfield, *Culture of Sensibility*, 68.

²⁰⁷ See *ibid.*

²⁰⁸ Dabhoiwala, *Origins of Sex*, 105.

these literary representations added flesh to the physiological skeleton assembled by late seventeenth-century authors.

Sensual Pleasure, Intellectual Pleasure, and Passions

When external stimuli did stir the animal spirits, as Willis had described, it could result in a *passion*. Passions were problematic because they distracted the mind and led to imprudent behaviour. According to Cheyne, passions or affections were either when “the *Thoughts* of the *Mind* affect the *Body* [or] those whereby the *Actions* or *Sensations* of the *Body* affect the *Mind*.”²⁰⁹ Passions, as Cheyne described, mutually influenced the body and mind through the mechanisms of nerves.²¹⁰ Passions were also, as Paul Goring has described, “natural components of human physiology which had the potential to cement—but also to disrupt—harmonious social relations.”²¹¹ Sexual sensations and desires were likely to raise passions, override reason, and affect social behaviour.²¹² While Cheyne’s manual was still in print, Fielding published *Joseph Andrews* (1742), which included a particular sexual intrigue between Lady Booby and her footman Joseph that exemplified physiological passions. Lady Booby, upon having an “inflamed Imagination” in regards to Joseph, struggles not to “satisfy every Appetite, every Desire, with their utmost Wish.”²¹³ Sexually unsatisfied and frustrated, Lady Booby exclaims, “I despise, I detest my Passion.”²¹⁴ Once Joseph appears utterly unattainable, she regains her reason and pompously muses:

How much more exquisite the Pleasure resulting from the Reflection of Virtue and Prudence, than the faint Relish of what flows from Vice and Folly! Whither did I suffer this improper, this mad Passion to hurry me, only by neglecting to summon the Aids of Reason to my Assistance? Reason, which hath now set before me my Desires in their proper Colours, and immediately helped me to expel them. Yes, I thank Heaven and my Pride, I have now perfectly conquered this unworthy Passion; and if there was no Obstacle in its way, my Pride would disdain any Pleasures which could be the Consequence of so base, so mean, so vulgar——²¹⁵

²⁰⁹ Cheyne, *Health and Long Life*, 144.

²¹⁰ For discussion on Cheyne’s notion of passions and nerves, see Yallop, *Age and Identity*, 77.

²¹¹ Paul Goring, *The Rhetoric of Sensibility in Eighteenth-Century Culture* (Cambridge: Cambridge University Press, 2005), 39.

²¹² For discussion about eighteenth-century advice on governing the passions by reason, see Barker-Benfield, *Culture of Sensibility*, 42.

²¹³ Henry Fielding, *The History of the Adventures of Joseph Andrews, and of His Friend Mr. Abraham Adams* (London: A. Millar, 1742), 2: 271.

²¹⁴ *Ibid.*

²¹⁵ *Ibid.*, 272.

Following this affectedly dignified speech on desire, pleasure, and reason, Lady Booby learns that Joseph's affections might actually be won, and her newfound reason and virtuous front readily succumb to her carnal passions.

Passions, like desires, were a physiological phenomenon that occurred in the nerves and bound the body and mind. A little known author then as now, W. Jackson of Lichfield Close wrote a deist treatise called *The Beauties of Nature* (1769), which one reviewer suggested had "some of Stern's indecency in his preface, and though some of the verses are as nasty as Swift's, there is not the least trace of any other resemblance."²¹⁶ Jackson examined some Lockean ideas, particularly concerning the ambiguity posed by passions. He observed, "Whether Will is a Power of the Soul or Body we know not, Because the Manner of their Union is a Stranger to us; neither can we tell whether we have any Power or Passion that is not produced by the mutual Concurrence of both."²¹⁷ He admitted that "we cannot tell from whence our lowest Desires and vilest Passions proceed; from the Body, exclusive of the Soul, they cannot; from the Soul, independent [*sic*] of the Body, is impossible."²¹⁸ Such low passions, desires, and affections were crucial motivations in literature of sensibility because of the importance given to involuntary nervous responses. Take for instance the character Peregrine Pickle, created by the doctor and literary author Tobias Smollett.²¹⁹ Peregrine is an intelligent and sensible figure who was hot-blooded in both temper and desire. Throughout the novel, his gallant mishaps are consequences of his susceptibility to passions emanating from both his mind—typically following injury to his pride—or his body—typically following arousal by a female.²²⁰ Smollett, like many other writers, wrote of these passions in physiological terms, citing the motion of spirits and their effects on the mind as causing lapses in reason and bouts of rash behaviour. As Aileen Douglas has

²¹⁶ *A Monthly Review; or, Literary Journal: By Several Hands*, vol. 17 (London: R. Griffiths, 1770), 167. The reviewer summed up *The Beauties of Nature* as "trite thoughts ill expressed; but, for the most part, grave and solemn."

²¹⁷ W. Jackson, *The Beauties of Nature, Displayed in a Sentimental Ramble through her Luxuriant Fields...* (Birmingham: printed by J. Baskerville and sold by M. Morgan, 1769), 150.

²¹⁸ *Ibid.*, 151. Jackson also mused, "but that God may have the Power of annexing Thought to Matter as well as to Spirit... he may, for ought we know, have affixt it to our Bodies" (153).

²¹⁹ Tobias Smollett, *The Adventures of Peregrine Pickle...*, 4 vols. (London: printed for the author and sold by D. Wilson, 1751). For a brief account of Smollett's medical background and important relationships, which included John Armstrong, William Smellie, and the Hunter brothers, see Daniel M. Musher, "The Medical Views of Dr. Tobias Smollett (1721-1771)," *Bulletin of the History of Medicine* 41, no. 5 (1967): 455-62; G. S. Rousseau, "Doctors and Medicine in the novels of Tobias Smollett" (Ph. D. diss., Princeton University, 1966); D. Bruce, *Radical Doctor Smollett* (London: Victor Gollancz, 1964).

²²⁰ Notably, Peregrine Pickle was prone to folly, and, as David Turner observes, certain words relating to sexual transgressions, such as "folly," actually "implied loss of reason and self-command." David Turner, *Fashioning Adultery: Gender, Sex and Civility in England, 1660-1740* (Cambridge: Cambridge University Press, 2002), 31.

suggested, Smollett had been “encouraged by philosophy to reconceptualise the body.”²²¹ Philosophical and physiological ideas about feelings and desires are evident in many literary characters of sensibility.

However, reason could regain its lost command. As Locke advocated in his treatise on stable civil society and government, reason’s rule was marked by care, moderation, and prudence.²²² These themes about maintaining good reason appeared in many writings published during the century. One example that gave an especially close examination of that theme was Armstrong’s *The Oeconomy of Love*. As Adam Budd has noted, Armstrong’s writing was often preoccupied with ideas of nervous sensibility, and *The Oeconomy of Love* specifically was a “dramatic depiction of sympathy” that incurred censure for being licentious.²²³ Armstrong’s poem also describes how Pleasure undermines Reason, but then how “Cool Reason” can regain dominance.

The love of Pleasure sways each Heart, and we
From that no more than from ourselves can fly:
Blameless when govern’d well. But, where it errs
Extravagant, and wildly leads to Ill,
Public or private, there its curbing Power
Cool Reason must exert.²²⁴

Armstrong’s advocacy of pleasure “govern’d well” reflected the attitude typical of medical advice literature: that sexual behaviour was best in moderation and within the confines of good reason. Therefore, certain kinds of pleasure were more readily condoned than others. Whereas sexual pleasure that emanated from the body easily “leads to Ill,” intellectual pleasure was only achieved by exerting the higher faculties over the whims of the lower.²²⁵ In 1750, the Oxford and Cambridge miscellany, *The Student*, published a biographical piece on Dr. More, who was known for his refined character and intellectual accomplishments. The author praised More for having conditioned his mind and body towards intellectual

²²¹ Aileen Douglas, *Uneasy Sensations: Smollett and the Body* (Chicago: University of Chicago Press, 1995), 48.

²²² John Locke, *Two Treatises of Government*... (London, 1689).

²²³ Adam Budd, *John Armstrong’s The Art of Preserving Health: Eighteenth-Century Sensibility in Practice* (Farnham: Ashgate, 2011), 4-8, 19, 18.

²²⁴ Armstrong, *Oeconomy of Love*, 14.

²²⁵ For an analysis of intellectual pursuits and pleasures, see John Brewer, *The Pleasures of the Imagination: English Culture in the Eighteenth Century* (Abingdon: Routledge, 2013 [orig. 1997]). According to Brewer, eighteenth-century “British writers on taste and the arts ... wanted to distinguish the ‘emotions of taste’ from other feelings such as sexual desire and acquisitiveness” (1).

endeavours.²²⁶ It seems More had attained the finer intellectual pleasures, such as the “pleasure of rational Conversation with one’s Friend, or discovering of a speculative Truth upon study.”²²⁷ Because of a constitution well-trained, More’s “body never led the mind astray, nor did the mind need to exert a painful sovereignty over the body.”²²⁸

This well-groomed character instanced how “*Intellectual Pleasure* is in vain pursued, ‘till the passions and appetites are brought under proper restraints.’”²²⁹ As Cheyne notably advocated, the body required a healthy and strict regimen to suppress dangerous passions and appetites.²³⁰ According to Cheyne, “sudden *Gusts of Joy or Grief, Pleasure or Pain*, stimulate and spur the *nervous* Fibres, and the *Coats* of the *animal Tubes*; and thereby give a *Celerity* and brisker Motion to their included Fluids.”²³¹ Such intense nerve activity impaired the “*Intellectual* Faculties.”²³² The pleasures of intellectual improvement, however, needed guarding against upheaval by sexual desires. Many, such as Hartley, warned that lust indulged consumed all other pleasures.²³³ Hartley’s explanation was based on Locke: because sexual pleasure was more strong and violent, other pleasures became associated with the sexual.²³⁴ Likewise, the editor-commentator on the fifth edition of Armstrong’s *The Oeconomy of Love* noted that by “the factious Chief” the poet meant “the Passion of Lust, when predominant.”²³⁵ As the poet and diplomat Matthew Prior intimated, intellectual pursuits leading to reason were particularly susceptible to being derailed from sexual desire:

To jocund Mirth, soft Joy, and careless Ease:
Forsake what may instruct, for what may please:
Essay amusing Art, and proud Expend;

²²⁶ “Of Intellectual Pleasure,” *The Student, or, the Oxford and Cambridge Monthly Miscellany* 1 (Oxford: printed for J. Newbery in London, J. Barrett in Oxford, and J. Merrill in Cambridge, 1750).

²²⁷ Locke, *An Essay*, 115.

²²⁸ “Of Intellectual Pleasure,” 15-6.

²²⁹ *Ibid.*, 16.

²³⁰ See Foucault’s discussion of sexual self-mastery and dietetics, *Uses of Pleasure*, 78, 98.

²³¹ Cheyne, *Health and Long Life*, 95. In a letter to Cheyne, David Hume confided at length about his melancholy and how studying would “waste my Spirits & bring on me this Distemper,” which he called “the Disease of the Learned.” His remedy was to be “very regular in my Diet & way of Life,” which involved him daily drinking “an English Pint of Claret Wine” and riding “8 or 10 Scotch Miles.” Letter from David Hume to George Cheyne, March or April 1734, retrieved from *Electronic Enlightenment*.

²³² Cheyne also affirmed that “*violent and sudden Passions* are more dangerous to *Health*, than the *slow and continued*.” *Health and Long Life*, 98.

²³³ Hartley, *Theory of the Human Mind*, 1: 88.

²³⁴ Armstrong emphasized the power of sexual pleasure over all others too. “Of all the Joys that to delight are wont, / There’s none so sweet as——in a——. / Each rapt’rous Sense is so divinely bless’d.” Armstrong, *Oeconomy of Love*, 151.

²³⁵ *Ibid.*, 8.

And make thy Reason subject to thy Sense.²³⁶

Sexual pleasures were easily discovered and gained. While intellectual pleasures were by nature moderate and long lasting, sexual pleasures were fleeting because that which arises “from gross animal causes cannot remain long at its height.”²³⁷ And, as one bawdy poem reminded, “Pleasure, when got with Pain, augments our Joys; / But when its got with Ease, too soon it cloyes.”²³⁸ Like other wild passions, sexual desire was violent and periodic, upsetting reason, disrupting the constitution, and destabilizing both the individual and society around them. These themes, but with less censure, were also examined closely in erotic literature.

Sensation and Desire in Erotic Literature of Sensibility

No other novel so fully adopted physiological constructions of pleasure as *Fanny Hill*. Cleland’s interest in medical and physiological concerns was particularly well reflected in his later literary endeavors. Yet even in *Fanny Hill*, physiology was a key lens through which Cleland examined the philosophy of sexual pleasure. More than explicit material meant for readers’ sexual gratification, *Fanny Hill* was an exploration-in-narrative of enlightenment ideals on pleasure; specifically, how to be “a rational pleasurer.”²³⁹ The story begins as so many other eighteenth-century novels do, with a hapless adolescent making her maiden journey from her country home to the London metropolis. This beginning is just one of the many stylistic features aligning *Fanny Hill* with a then growing corpus of sensibility novels. Indeed, the book’s premise is about how a person of naturally sensible parts, such as Fanny, connects to the world she is faced with, which happens to be an urban world centred on sex. As she explores sexuality, the narrative more broadly explores the relationship between mind and body, and often in terms borrowed from nerve physiology.

These physiological terms, notions, and images allowed Cleland to compose a new kind of erotica, one which emphatically dramatized the individual’s internal experience. In the text, he plainly shared his dissatisfaction with erotic vocabulary previously in use:

There is no escaping a repetition of near the same images, the same figures, the same expressions, with this further inconvenience added to the disgust it creates that the words *joys*, *ardours*, *transports*, *ecstacies*, and the rest of those pathetic terms so congenial to, so received in the *practice of pleasure*, flatten and lose much of their due spirit and energy by the frequency they

²³⁶ Matthew Prior, “Pleasure: The Second Book,” in *Poems on Several Occasions* (London: printed for J. Tonson and J. Barber, 1721), 157.

²³⁷ Hartley, *Theory of the Human Mind*, 1: 88.

²³⁸ “Delights of Venus,” 19.

²³⁹ Cleland, *Fanny Hill*, 211. Peter Wagner suggests that in *Fanny Hill* “Cleland tried to formulate in a fictional form a philosophical concept of human sexuality borrowed from French hedonistic sources and adapted to the viewpoint and emotions of the English bourgeois.” Wagner, *Lust & Love*, 27.

indispensably recur with, in a narrative of which that *practice* professedly composes the whole basis.²⁴⁰

By adopting terms from nerve physiology, Cleland could also employ the same revolutionary technique other writers of sensibility did: reader sympathy. Therefore, concerning descriptive vocabulary, he invoked his readers to give their “imagination and sensibility the pleasing task of repairing it by their supplements, where my descriptions flag or fail: the one will readily place the pictures I present before your eyes; the other give life to the colours where they are dull, or worn with too frequent handling.”²⁴¹

Reading sensibility was to engage, experience, and sympathize with the feelings of characters. Toward this idea, Hartley suggested that reading caused arousal through “the associated circumstances of any sensations, such as the language that relates to them, will recall the ideas of these sensations.”²⁴² Barker-Benfield notes, “Concern over the sexual effects of reading was a specific expression of the broader apprehension of reading’s power, its capacity, in Dr. Johnson’s phrase, ‘to produce effects without the intervention of the will.’”²⁴³ Sentimental fiction’s ability to “stimulate the readers to feel”²⁴⁴—even to involuntarily feel—was a literary device used to heighten audience experience. This device was deployed to many ends; for instance, sentimental narratives about prostitutes and fallen women inspired compassion and philanthropy, which led to several charities such as the Lock and Magdalen hospitals in the mid-eighteenth century.²⁴⁵ But, just as pain and suffering evoked reader responses, so too did pleasure. Cleland’s application of this technique to erotica proved particularly successful.²⁴⁶ The pleasure of sex became paired with the pleasure of reading.

The mental picture show that Cleland offered had crimson blushes, bright flushes, twinkling eyes, trembling limbs, dying sighs, faints, swoons, convulsions, gasps, and spirits flowing throughout the body and mind with transporting pleasures. These terms were dramatic and physiological. Arousal, for instance, occurred as any anatomist may have

²⁴⁰ Cleland, *Fanny Hill*, 129.

²⁴¹ *Ibid.*

²⁴² Hartley, *Theory of the Human Mind*, 1: 87.

²⁴³ Barker-Benfield, *Culture of Sensibility*, 330.

²⁴⁴ *Ibid.*

²⁴⁵ Markman Ellis, *The Politics of Sensibility: Race, Gender and Commerce in the Sentimental Novel* (Cambridge: Cambridge University Press, 1996), 15. For how compassion relied on sympathy, sentimentality, and sensibility, see Norman S. Fiering, “Irresistible Compassion: An Aspect of Eighteenth-Century Sympathy and Humanitarianism,” *Journal of the History of Ideas* 37, no. 2 (1976): 195-218.

²⁴⁶ As Barker-Benfield observes about sentimental literature’s ability to make readers feel, “Moralists wished to capitalize on this power, just as dramatists did.” *Culture of Sensibility*, 330.

described: “highly provoked an itch of florid warm-spirited blood through every vein.”²⁴⁷ Pleasure became a bodily fluid, as a “sweetly soothing balmy titillation opened at the warm jerk all the sluices of joy on my side.”²⁴⁸ The economy of spirits was the economy of pleasure, as instanced in one sexual episode which “ended at length in the liquid proof on both sides that we had not been exhausted, or at least were quickly recruited of last night’s draughts of pleasure on us.”²⁴⁹

The physiological register of animal spirits was inextricable from Cleland’s philosophical approach to sexual pleasure. Throughout the novel, as Porter observed, “the ‘principle of pleasure’ was presumed to be the *primum mobile* of human action.”²⁵⁰ That motivation of action in *Fanny Hill* could just as accurately be said to be animal spirits. Just as the anatomists described, genitalia in *Fanny Hill* emanated sexual desire and acted as a self-willed organ.

The lips of the original one of nature, which had owed its first breathing to his dear instrument, clung, as if sensible of gratitude, in eager suction round it, whilst all its inwards embraced it tenderly with a warmth of gust, a compressive energy, that gave it, in its way, the heartfelt welcome in nature; every fibre there gathering tight round it, and straining ambitiously to come in for its share of the blissful touch.²⁵¹

Not only does this excerpt question how bodily pleasure induces behaviours, but it offers the reader an especially graphic image. The idea of genitals acting autonomously, or self-willed, used the notion of appetites. During “a pleasure stop” Fanny’s “nethermouth, as full as it could hold, kept palating, with exquisite relish, the morsel that so deliciously engorged it.”²⁵² Cleland described this “delicate glutton” as acting “by a secret spring of suction and compression that obeys the will in those parts.”²⁵³ Significantly, his descriptions negotiated the same animal and mechanical ideas of genitalia that anatomists discussed.²⁵⁴

Cleland’s portrayals presented a positive alternative to Young’s negative criticisms and warnings about bodily influences on the mind. For Fanny, arousal created “so pleasing an agitation and worked so strongly on my soul that it sent all its sensitive spirits to that

²⁴⁷ Cleland, *Fanny Hill*, 61.

²⁴⁸ *Ibid.*, 221.

²⁴⁹ *Ibid.*, 163.

²⁵⁰ Roy Porter, “Mixed Feelings: The Enlightenment and Sexuality in Eighteenth-Century Britain,” in *Sexuality in Eighteenth-Century Britain*, ed. Paul Gabriel Boucé, 1-27 (Manchester: Manchester University Press, 1982), 5.

²⁵¹ Cleland, *Fanny Hill*, 220.

²⁵² *Ibid.*, 119.

²⁵³ *Ibid.*

²⁵⁴ For those physiological ideas about genitalia in the eighteenth century, see chapter two.

organ of bliss in me dedicated to its reception.”²⁵⁵ Deist views resonated with such accounts; pleasure and sensibility appear as naturally revealed experiences. Therefore, Fanny declared, “but for me, whose natural philosophy all resided in the favourite center of sense, and who was ruled by its powerful instinct in taking pleasure by its right handle, I could scarce have made a choice more to my purpose.”²⁵⁶ Contrary to anatomists and moralists, Cleland suggested that the rational mind and the sensible body could be in harmony, rather than conflict. Fanny finally realizes this ideal near the close of the novel, as an older lover teaches her “to be sensible that the pleasures of the mind were superior to those of the body.”²⁵⁷ Fanny successfully becomes a rational pleurist.

Losing Reason, Gaining Pleasure in Erotic Literature of Sensibility

Like in Willis’s accounts, Cleland portrayed gaining sexual pleasure as necessitating the loss of reason in both males and females. This loss preceded the animal spirit and consequent mental deficits caused by ejaculation. In order to experience sexual pleasure, sense and awareness had to leave the mind and relocate to the groin. Cleland represented this sacrifice of reason as happening in many different ways. For instance, if the mind was not in sympathy with the sexual action, then pleasure was experienced only by the body, without impression on the mind and was, therefore, muted. But, ideally, rational faculties were willingly and thoughtfully forfeited to episodes of animal pleasures, which was the key to being a “rational pleurist.”

Fanny’s initial experiences of having her consciousness conveyed with her spirits down to her genitalia were unrefined and unintentional—at least on her part. While voyeuristically watching a couple making love, Fanny felt “transported, confused, and out of myself. Feelings so new were too much for me; my heated and alarmed senses were in a tumult that robbed me of all liberty and thought; tears of pleasure gushed from my eyes and somewhat assuaged the fire that raged all over me.”²⁵⁸ The experience of losing “all liberty and thought” proved too unsettling, too disturbing, for Fanny not to give her tumultuous spirits vent, at least partially through tears. She quickly became more familiar with these internal events that accompanied arousal: “my pulses beat fears, amidst a flush of the warmest desires: this struggle of the passions, however, this conflict betwixt modesty and lovesick longings, made me burst into tears.”²⁵⁹ This explicit consideration of the conflict between sexual passions and the mind was characteristic of the erotic and medical focus of the text.

²⁵⁵ Cleland, *Fanny Hill*, 219.

²⁵⁶ *Ibid.*, 117.

²⁵⁷ *Ibid.*, 211.

²⁵⁸ *Ibid.*, 49.

²⁵⁹ *Ibid.*, 76.

But, according to Cleland, forfeiting the rational mind to carnal desires was as much learned as instinctive, especially for the intellectual. In the progression of a sexual episode, bodily passions must override the mind. Cleland affirmed this process through numerous expressions, which tellingly emphasize the loss of rational thought as being vital to sexual experience: “he was now under the dominion of desires he could not bridle;”²⁶⁰ “now, outrageous, and no longer his own master, but borne headlong away by the fury and over-mettle of that member now exerting itself with a kind of native rage;”²⁶¹ “those so sensible parts had put everything into such ungovernable fury;”²⁶² “I was so much out of my usual sense, so subdued by the present power of a new one;”²⁶³ “melting fast away into pleasure, I abandoned myself over to all its transports, and gave it the full possession of my whole body and soul;”²⁶⁴ “took all power over my thoughts out of my own disposal, and delivered up every faculty of my soul to the sensiblest of joys;”²⁶⁵ “the delicious disorder in which all my senses were rapturously lost;”²⁶⁶ and, “in short, it was not in my head that I now obeyed.”²⁶⁷ These various expressions of the same process—of the mind’s sensibility repairing down to the groin—represent the erotic climax in the narrative, the height of pleasure, and the initial stage of ejaculation. Following Cleland, the loss of reason became part and parcel of depicting sex.

Without sense moving from the mind to the genitals pleasure was lost—a state of insensibility and non-sympathy undermined feeling. Fanny experienced this sexual insensitivity twice: the first was just after she lost her lover, Charles, which left her distraught and distracted. With her spirits freshly scattered, she is courted and seduced by a gentleman suitor, Mr. H—. Fanny recollects that she did not “know what he was about, till recovering from a trance of lifeless insensibility, I found him buried in me, whilst I lay passive and innocent of the least sensation of pleasure: a death cold corpse could scarce have had less life or sense in it.”²⁶⁸ The loss of sexual feeling parallels a loss of consciousness; she is deprived the necessary emotional and mental conditions for pleasurable sensations in her sex organs to register. However, this muted sexual experience was eventually overcome by the sexual and physiological influences of Fanny’s stimulated genitals. Attempting her again, Mr. H— excited Fanny’s nerves and spirits so as to provoke a sympathy of pleasure between her body and distracted mind:

²⁶⁰ Ibid., 56.

²⁶¹ Ibid., 78.

²⁶² Ibid., 84.

²⁶³ Ibid., 137.

²⁶⁴ Ibid., 148.

²⁶⁵ Ibid., 218.

²⁶⁶ Ibid., 214.

²⁶⁷ Ibid., 177.

²⁶⁸ Ibid., 97.

He soon gave nature such a powerful summons down to her favourite quarters that she could no longer refuse repairing thither. All my animal spirits then rushed mechanically to that center of attraction, and presently, inly warmed and stirred as I was beyond bearing, I lost all restraint, and yielding to the force of the emotion, gave down, as mere woman, those effusions of pleasure, which, in the strictness of still faithful love, I could have wished to have held up.²⁶⁹

Although animal pleasure broke in upon her mind and gave Fanny the experience of pleasure, the sympathy of feeling between the mind and body was stilted. She observes,

What an immense difference did I feel between this impression of a pleasure merely animal and struck out of the collision of the sexes by a passive bodily effect, from that sweet fury, that rage of active delight which crowns the enjoyments of a mutual love-passion, where two hearts, tenderly and truly united, club to exalt the joy, and give it a spirit and soul that bids defiance to that end which mere momentary desires generally terminate in.²⁷⁰

When soul and body were in harmony, and when there was sympathy between lovers, pleasure received its fullest expression. In Cleland's happy-whore story, forced and insensible sex represents one of the few drawbacks to being a lady of pleasure. Having lots of sex is not necessarily negative, but having unfeeling sex was.

Yet, Fanny's second experience with sexual insensibility resulted from an entirely different cause: she purposely kept possession of her mind. Her initial encounter with the sex-obsessed Mr. Norbert was arranged under the pretense that Fanny was a virgin. Fanny and her Madame, Mrs. Cole, schemed to fake the loss of Fanny's maidenhead for Mr. Norbert's satisfaction and his exorbitant fee. Preoccupied with acting the part, Fanny maintained her mental composure while pretending coy maid. As Mr. Norbert gained upon his supposed virgin prize, Fanny mused that "insensibility kept me so much the mistress of my mind and motions."²⁷¹ Without the loss of reason, sexual pleasure was again stilted.

In further examining how the faculty of reason affected pleasure, Cleland advanced a peculiar question: what if the person has no reason to begin with? Fanny and her fellow prostitute, Louisa, hatched a scheme to try the parts of a local "changeling, or idiot"²⁷²—since, as the saying went, "a fool's bauble is a lady's play-fellow."²⁷³ Upon seduction, Fanny and Louisa's expectations were not disappointed: Good-natured Dick lived up to his name,

²⁶⁹ Ibid., 100-01.

²⁷⁰ Ibid., 101.

²⁷¹ Ibid., 174.

²⁷² Ibid., 197.

²⁷³ Ibid., 199.

as “nature had made him amends in her best bodily gifts for her denial of the sublime intellectual ones.”²⁷⁴ The course of pleasure in Good-natured Dick was crucially different from figures possessing intellect and sensibility. He was purely direct by “animal ideas.”²⁷⁵ Just as Fanny had been during her insensible stupor following Charles’ departure, Good-natured Dick was entirely passive, even though the signs and symptoms of bodily arousal were evident. The “animal pleasure glared distinctly in the simpleton’s countenance,” but roles of fancy, reason, imagination, and intellectual pleasure were absent.²⁷⁶ Only Fanny’s and Louisa’s tactile promptings “put the principles of pleasure effectually into motion.”²⁷⁷ The “sting of pleasure” made him “greater than himself; his countenance, before so void of meaning or expression, now grew big with the importance of the act.”²⁷⁸ Changes in his physiognomy betray the movement of pleasure-stirred animal spirits within the simpleton. In this case, the sympathy created between the animal soul and the intellectual soul raises the activity of the intellectual.

Good-natured Dick was, sadly, unable to achieve the ideal situation of a rational pleurist—such a station was only available to people of sensibility, in both cerebral and genital centers. As Cheyne had described, “Men of *Imagination* are generally given to *sensual* Pleasure, because the Objects of *Sense* yield *them* a more delicate *Touch*.”²⁷⁹ In his thinly veiled discussion on sexual pleasure, James Boswell similarly suggested that “as all Pleasure depends very much on the imagination, and Pleasure may, by the warm and enlivening influence of that power, be refined and exalted to a pitch far beyond what persons of dull faculties can conceive.”²⁸⁰ For him, as a self-proclaimed hypochondriac, he affirmed that “none have a keener relish of every species of pleasure than Hypochondriacks.”²⁸¹ Sexual sensibility required a degree of intelligence. Both the mind and the body needed the capacity for delicate feeling and to sympathize with each other. Reflecting mid-century sentiments about physiology and gender, Cleland’s novel affirms the idea that both females and males could have this delicacy and sympathy or fail to have it, depending on their innate capacities and experiences.

²⁷⁴ Ibid., 198.

²⁷⁵ Ibid., 197.

²⁷⁶ Ibid., 198.

²⁷⁷ Ibid., 199-200. For a discussion of the mechanical trope in this scene, see Muri, *Enlightenment Cyborg*, 195.

²⁷⁸ Cleland, *Fanny Hill*, 200.

²⁷⁹ Cheyne, *Health and Long Life*, 98.

²⁸⁰ Boswell, “On Pleasure,” 212.

²⁸¹ Ibid. For a discussion of eighteenth-century ideas of melancholy, which included a predisposition to pleasure and the influence of Willis’s work, see Allan Ingram, *Boswell’s Creative Gloom: A Study of Imagery and Melancholy in the Writings of James Boswell* (Basingstoke: MacMillan Press, 1982), 11-14.

Fanny's crowning episode of pleasure, which she shares with her recovered lost love, Charles, does not involve a more rationally tempered pleasure. Rather, this finale of pleasure involves more bodily symptoms of arousal, more mechanical and animal functions, and more flurried animal spirits migrating from the brain to the groin. The rational pleurist, as Cleland imagined, did not mean retaining rational faculties during pleasure, but rationally choosing to experience pleasure or, to use a more Lockean phrase, willfully succumbing Reason's command to the edicts of Pleasure. That ascendancy of pleasure in sensible characters could be read through recognizable psychosomatic changes.

Symptoms of Pleasure as Dramatic Gestures

In his poem *Sensibility*, Johnson detailed the conventional stock of physiological and external symptoms that disclosed internal passions. He noted the features on which the language of love, pleasure and pain were imprinted: involuntary breaths, flushes of the skin, looks of the eyes, and trembling limbs.

The kindling Passion thrill in every vein;
What time her absent thought, th' unbidden sigh,
And paler cheek disclose the secret Care.
Now steals on Him, who gave the tender wound,
The glance of Love: Now, at his mention'd name,
Spreads the deep blush; and o'er the trembling form,
At his approach, disorder'd Graces spring.²⁸²

Other authors saw such signs of the passions as healthy, normal, and constitutional. Those specific gestures and cues, such as a blush, were part of that organ's "perfect execution of their offices," according to Pouilly.²⁸³ In the same year as that tract was printed in England, *Fanny Hill* was published, in which characters routinely had "cheeks flushed with a deeper scarlet, . . . eyes turned up in the fervent fit and rolling nothing but their whites, some dying sighs and an agonizing shudder."²⁸⁴ So often the function of those dramatic symptoms simply "announced the approaches of that ecstatic pleasure."²⁸⁵ Cleland like other writers—erotic or otherwise—adopted these physiological cues to express feelings of pleasure and pain. This adoption served a twofold purpose: it provided recognizable imagery for sexual sequences, and it was the basis for sympathy between lovers with sensibility.

Cleland used these physiological symptoms in a regular fashion to communicate the dramatic developments of sexual episodes, and in an especially visual figurative language.

²⁸² Johnson, the argument to *Sensibility*, 6.

²⁸³ Pouilly, *Theory of Agreeable Sensations*, 66.

²⁸⁴ Cleland, *Fanny Hill*, 80.

²⁸⁵ *Ibid.*

Readers interpreted and felt bodily language in literature of sensibility;²⁸⁶ the same applied to readers of *Fanny Hill*, with the additional consequence of arousal. In the novel, each sequence included the important signals of sexual interest, arousal, and pleasure. One suitor of Fanny's acted "modest and innocent" but betrayed his interest in pleasure because "his eyes, naturally wanton, and now inflamed by passion, spoke a great deal more than he durst have imagined they did."²⁸⁷ Indeed, these physical signs communicated as powerfully as speech or writing. In a moment of arousal, another suitor of Fanny's "obtained of my tacit blushing consent all the gratifications of pleasure left in the power of my poor person to bestow."²⁸⁸ This same notion was repeated in *The Dictionary of Love*, an off-colour lexicon published anonymously in 1753. In that racy glossary, a definition of "Nothing" reads as follows: "It is a maxim in general practice, as well as in Love, that she who says nothing, gives consent.... But when there is withal a tender, languishing look, a perplexed air that accompanies this silence, there is no doubt to be made of the energy and meaning of it."²⁸⁹ Misogynist as this tongue-in-cheek definition is, it highlights the array of tacit gestures that conveyed meaningful sexual hints and cues for many in Georgian society.

Completing the sexual sequence through such gestures was the signs of orgasm: "in a loud expiring sigh, in the closure of her eyes, the stretch-out of her limbs, and a remission of her whole frame, gave manifest signs that all was as it should be, and happily well over with her."²⁹⁰ In such sensible moments of pleasure, all expressive body parts affected symptoms of feeling. Within the narrative, these same symptoms also enabled sympathetic pleasure between sensible characters. For lovers such physiological and visible cues communicated their internal and genital conditions, which induced more mutual pleasure. Fanny relates one such communication: "I sensibly found my gallant shared in, by his nervous and home expressions of it: his eyes flashing eloquent flames, his action infuriated with the stings of it, all conspiring to raise my delight by assuring me of his."²⁹¹ Cleland described this mutual assurance of pleasure as a "train of symptoms; a sweet sensibility."²⁹² In moments of exquisite pleasure, such as when Fanny was reunited with Charles, this train of symptoms was communicated through both individuals' entire constitutions: "whilst we exchanged hearts at our eyes, and renewed the ratifications of a love unabated by time or absence: not a breath, not a motion, not a gesture on either side but what was strongly

²⁸⁶ Juliet McMaster, introduction to *Reading the Body in the Eighteenth-Century Novel* (Basingstoke: Palgrave Macmillan, 1988).

²⁸⁷ Cleland, *Fanny Hill*, 107.

²⁸⁸ *Ibid.*, 143.

²⁸⁹ *The Dictionary of Love...* (London: printed for R. Griffiths, 1753), s.v. "Nothing."

²⁹⁰ *Ibid.*, 207.

²⁹¹ *Ibid.*, 161.

²⁹² *Ibid.*, 217-8.

impressed with it.”²⁹³ Love, feeling, and pleasure were impressed upon every gesture, for the reader to imagine, share, and feel just as characters did.

Achieving Sexual Pleasure as a Narrative Structure

Eighteenth-century fiction often represents marriage as a resolution to the struggles, especially sexual struggles, of young adult characters. This kind of sexual bildungsroman was particularly conventional in erotic literature. For Fanny Hill, attaining self-knowledge about sexual pleasure equates to the realization of her station in the world as an adult. In that genre, the plot involved a maturing through developing venereal inclinations and gaining carnal experience. Typically, the protagonist comes of age through struggling with sexual frustrations, doubt, misdirection, and disillusionment, yet eventually gains awareness and appreciation of pleasure and the sexual world. This erotic trope was not new, but its use in novels, particularly to explore physiology and the mind, was. Unlike a typical bildungsroman, this sexual version was applied to female characters as much as male, if not more. Non-erotic texts also use this narrative theme in more polite forms. Characters struggle against sexual dangers, misgivings, and confusions to achieve stability and happiness through nuptial unions. As Dabhoiwala has argued, these narratives are profoundly gendered.²⁹⁴ They often include types such as susceptible women withstanding sexual dangers and libertine men reformed by the love of a good woman. Strikingly, both polite and bawdy stories frequently pursued similar plots, although the attitudes and language differed.

In erotic texts, the sexual bildungsroman often focused on the loss of virginity. For instance, Song XXVI from *Cure for the Spleen* is a particularly colourful version of the young-maid-undone narrative. In this song, the wanton maid confesses her indiscretion to her mother, who, after railing, “You slut, you forward jade,” gives into her curiosity and inquires, “But tell me truly how it was, / And where he overcame you?”²⁹⁵ Like other stories of the type, the maid offers a titillating account:

He laid me down—I dream’d no harm,
For side-long we were laying;
But soon he turn’d me on my back,
And fiercely got upon me;
And when ‘twas in, such pain I felt,
I swore he had undone me.²⁹⁶

²⁹³ Ibid., 215.

²⁹⁴ Dabhoiwala, *Origins of Sex*, 169-79.

²⁹⁵ “Song XXVI,” in *The Cure for the Spleen...* (Newcastle, 1769), 32.

²⁹⁶ Ibid., 33.

The loss of innocence is paired with a shock of physical pain—a rite of passage through sensation. Yet, as the maidenhead is lost, the pleasure of womanhood is gained. The swain attempts a second bout, and the maid was

Unable to resist.
My willing legs extended,—
And, then it was, I do believe,
He caus'd my belly's plumping:
For after that he did lye still,
Tho' I was still for humping.²⁹⁷

The first sexual experience includes pain, pleasure, the discovery of a new animal desire, and the loss of volition and reason.

However, these new experiences were not necessarily in that order. As Fanny's fellow prostitutes shared their stories of lost virginity, Louisa relates that she was “scarce twelve years old before that part of me which she wanted so much to keep out of harm's way made me feel its impatience to be taken notice of and come into play.”²⁹⁸ Animal desire emanating from her pudenda preceded any sexual encounter. Louisa's tale is similar to Octavia's in the bawdy poem “The Delights of Venus.” When Octavia reached the age of sexual maturity, or had “Grown ripe,” her developing secondary sex characteristics were paired with an “itching Fancy” towards pleasure.²⁹⁹ These representations of budding desire show the experience as a natural, physiological surfacing of venereal feeling.

In erotic literature, males lost their virginity with much the same expressions, sensations, and meanings as females. Fanny seduced the young, innocent footman of her gentleman lover for her own pleasure and motives. In that affair, Fanny took the lead and attempted to coax the boy out of his innocence: “I was now too far advanced to stop in so fair a way, and was indeed no longer able to contain myself or wait the slower progress of his maiden bashfulness.”³⁰⁰ To ensure the virgin boy was ready to venture into sexual pleasure, Fanny observed the signs of his body, “I could perceive to sparkle in his eyes and glow in his cheeks. Then certain slight squeezes by the hand, as I took letters from him, did his business completely.”³⁰¹ Once his spirits are sufficiently roused, he loses self-control, his animal desires take over, and his senses are wholly overcome with new sexual feelings. He is transformed by the experience, and “waking, as it were, out of the trance of pleasure (in which every sense seemed lost for a while, whilst, with his eyes shut and short quick

²⁹⁷ Ibid.

²⁹⁸ Cleland, *Fanny Hill*, 144.

²⁹⁹ “Delights of Venus,” 14.

³⁰⁰ Cleland, *Fanny Hill*, 109.

³⁰¹ Ibid., 107.

breathings, he had yielded down his maiden tribute).³⁰² The narrative structure for males and females is nearly identical, and applying “maiden” to the boy’s loss of pucelage feminizes the event.

Both sexes show their innocence primarily through gesture and attitude. This reliance on gestures enabled faking virginity—as characters like Fanny and Daniel Defoe’s Moll Flanders do several times. In considering *Pamela*, Corrinne Harol has argued that Richardson emphasized “the *failure* of scientific methods” to determine Pamela’s virginity.³⁰³ Whether that is the case or not, the awareness and use of medical techniques and descriptions to show and observe female virginity occurred frequently in mid-century sentimental novels, such as *Pamela*. Virginity was commonly thought to be so physiognomically readable that Lignac found it necessary to rebuke those who “pretend to have acquired, by experience, lights sufficiently great, for undertaking to decide on the defloration or the virginity of a young woman, in solely considering her exterior appearance.”³⁰⁴ Lignac supplied several reports of these outward signs of virginity used and a table listing them (fig. 3.1). Many of these signs correspond to the way sexual experience, knowledge, and intention was communicated within the context of sensibility. False modesty and pretense to chastity often relied upon displaying such signs. Armstrong, for instance, warned innocent females about gallants making gestures of false modesty, “Trust not his Vows, / His labour’d Sighs, and well-dissembled Tears.”³⁰⁵ Males affected also sexual innocence through gesture. Literary portrayals of rakes regularly had them pretending innocence as a tactic for seducing females.³⁰⁶ The literature of sensibility was particularly concerned with teaching its young female readers to safeguard against such treacherous ploys.

Partly reflecting social and legal codes, the culture of sensibility involved a great deal of posturing about sexual experience, which fictional literature often taught readers about. Besides the greater impetus for females to enact virginity, the major difference in this loss of innocence and entrance to sexual pleasure was that females underwent a dramatic episode of pain. This maiden pain involved its own set of gestures, such as cries, tears, and fainting, and was central to erotic narratives of females losing their chastity. Pain was the rite of passage for female sexual awareness: “I arrived at excess of pleasure through excess of pain... I began to enter into the true unalloyed relish of that pleasure of pleasures.”³⁰⁷ The

³⁰² *Ibid.*, 111.

³⁰³ Corrinne Harol, “Faking It: Female Virginity and Pamela’s Virtue,” *Eighteenth-Century Fiction* 16, no. 2 (2004): 198.

³⁰⁴ Lignac, *Physical View*, 209.

³⁰⁵ Armstrong, *Oeconomy of Love*, 16.

³⁰⁶ See Barker-Benfield, *Culture of Sensibility*, 331-2.

³⁰⁷ Cleland, *Fanny Hill*, 80.

pain of defloration had vastly different meanings than other kinds of female venereal and reproductive pains, such as those associated with diseases or with labor. However, these pains all involved a disruption of the spirits and changes in the constitutions and minds of those who suffered them. Whether maiden pain or pleasure, these profound sensations were the gateway to sexual awareness in erotic literature of sensibility.

Pain in Erotic Literature

Many authors, both literary and medical, specially examined the role of pain in sexual experience. Cleland figured a sliding scale between pain and pleasure, similar to Willis's and Locke's conceptions. Cleland described how, while losing her maidenhead, one prostitute had felt "the pleasure rising, as the pain subsided."³⁰⁸ *Fanny Hill* also explored another idea suggested by Willis and Locke: that relief from pain created pleasure. The itch of desire was a nervous irritation or slight pain that drove sufferers to seek pleasurable relief. The tumult of animal spirits common to sexual pleasure, pain, and arousal explained painful sexual fetishes, like whipping. Pain, therefore, was an important feature in the physiological landscape explored by eighteenth-century erotica.

Venereal sensation, whether pain or pleasure, involved an excited migration of animal spirits to the genitalia. Therefore, distinguishing between those two sensations was often abstruse—they were too physiologically alike. The poet and playwright William Wycherley penned a short poem around the turn of the century, called "Proving Love more Pleasure, as more Pain," which played with the erotic confusion of these two sensations:

Love's so pleasant a Pain,
Such a tickling dear Smart;
That it makes me complain,
When it eases my Heart:
To be more my Joy, wou'd it were more my Grief,
To make it, as more my Pain, more my Relief:
For, its Troubles, or Cares,
But its Pleasures increase;
So that but for our Fears,
Our Joys in it were less;
Then more may my Troubles, Pains, Fears be, that so,
As they grow more, more may my Pleasures be too;

Since Love's Pains, and Fears still,
But augment more our Joy;

³⁰⁸ *Ibid.*, 137.

Which, when gain'd with Ease, will,
More our Pleasures destroy;
Our Joy's less then, as it with more Ease we gain,
Possess with less Pleasure, as had with less Pain.³⁰⁹

Wycherley's consideration of the dynamics of love's emotional pains and pleasures also conjures the physical, sensory meanings of those feelings. Whether bodily or cerebral, love's pleasures and pains were constantly in relation, sometimes felt simultaneously, and sometimes mutually exclusive.

Likewise, when encountering a very sizeable member, Fanny "felt such a mixture of pleasure and pain as there is no giving a definition of. I dreaded, alike, his splitting me farther up or his withdrawing: I could not bear either to keep or part with him."³¹⁰ Cleland, like other mid-eighteenth-century authors, was fascinated with this conflation and confusion of sexual feelings, especially in relation to those individuals who fetishized a "mixture of pleasure and pain." Johann Heinrich Meibomius' seventeenth-century *Tractus de Usu Flagrorum in re Medica et Veneria*, which contained insertions by Thomas Bartholin, was published in English translation by Edmund Curll in 1718. The preface of this nearly two-hundred-page digest argued that flogging "*stimulated the Parts of Generation to a Compliance with the Purpose of Nature.*"³¹¹ However, not all interest garnered by this text on flogging was purely medical.

Cleland would later explore flagellation too. While reasoning why some people enjoy flogging, Fanny decides that the purpose is "for quickening the circulation of their sluggish juices, and determining a conflux of the spirits of pleasure towards those flagging, shrivelly parts that rise to life only by virtue of those titillating ardours created the discipline of their opposites, with which they have so surprising a consent."³¹² This explanation highlights how pain and pleasure were understood to mechanically bring the mind into consent with body, and vice versa. The spirits were put into motion by the flagellation, sending pain to the mind, but also stimulating the nerves as if priming the mind and genitalia for sexual excitement. Flogging was one of "those arbitrary tastes that rule their appetites of pleasure with an unaccountable control: tastes, too, as infinitely diversified, as superior to and independent of all reasoning."³¹³ With a slightly less tolerant attitude, Armstrong represented flogging as a compensation for a physical deficiency:

³⁰⁹ William Wycherley, "Proving Love more Pleasure, as more Pain" in *Miscellany Poems* (London, 1704), 113.

³¹⁰ Cleland, *Fanny Hill*, 110.

³¹¹ Johann Heinrich Meibomius, *Treatise on the Use of Flogging in Venereal Affairs*, trans. anon. (London, 1718), preface.

³¹² Cleland, *Fanny Hill*, 180-1.

³¹³ *Ibid.*, 181.

Thence what desparate Toil,
By Flagellation and the Rage of Blows,
To rouse the *Venus* loitering in his Veins!³¹⁴

Although generally discouraged as abnormal and inappropriate behaviour, flogging was understood and excused as serving a therapeutic function, based on its apparent stirring of spirits.³¹⁵ Fanny's reflection on her foray into flogging reflected this substantial physiological effect:

Such a prickly heat, such fiery tinglings, as made me sigh, squeeze my thighs together, shift and wriggle about my seat with a furious restlessness; whilst these itching ardours, thus excited in those parts on which the storm of discipline had principally fallen, detached legions of burning, subtile, stimulating spirits to their opposite spot and center of assemblage, where their titillation rages so furiously that I was even stinging-mad with them.³¹⁶

The liberally minded supported their views on sexual behaviours through physiological arguments, as did the conservatively minded their own opinions. Sexual pain was seen as neither uncommon nor wholly undesirable, because it was inextricably connected with sexual pleasure through their shared effect on the nerves.

Pleasure and Pain in Political Philosophy

Like Willis, Locke, and Charleton, Cleland understood pain and pleasure as powerful motivators within people. There was no shortage of eighteenth-century medical writers who thought the same. In discussing "the Foundation of *Liberty* or *Free-will* in *rational* and *intelligent* Beings,"³¹⁷ Cheyne argued that "since outward *Objects* may be considered as *Goods* or *Evils*, the most natural Division of the *Passions*, (whether *Spiritual* or *Animal*) as they regard these *Objects*, is into the *Pleasurable* and the *Painful*; which exhausts their whole Extent."³¹⁸ Pleasure and pain motivated good and evil—the fundamental impetus for thought and action. Around the same time that Cheyne's first version of *An Essay on Health and Long Life* (1724) was published, Benjamin Franklin published *A Dissertation on Liberty and Necessity, Pleasure and Pain* (1725). Within this early pamphlet of Franklin's, he queried: "since *Freedom from Uneasiness* is the End of all our Actions, how is it possible for us to do any Thing disinterested?"³¹⁹ Franklin was one of many political philosophers who considered the causal link between human sensation and

³¹⁴ Armstrong, *Oeconomy of Love*, 23.

³¹⁵ See chapter four for further discussion on how exercises, such as riding, affected the spirits and sexual health.

³¹⁶ Cleland, *Fanny Hill*, 187-88.

³¹⁷ Cheyne, *Health and Long Life*, 91-2.

³¹⁸ *Ibid.*, 94.

³¹⁹ Franklin, *Dissertation on Liberty*, 17.

motivation as crucial to understanding individuals and society. This emphasis on sensation as motivation was later reiterated by John Mackenzie in his “The Love of Pleasure” (1772) when he wrote, “Pleasure is the spring of our actions, and whatever touches not this, will not affect us. In the enjoyment or pursuit of happiness, we waste our faculties, and exhaust our passions.”³²⁰ These political and moral philosophical conjectures remained grounded in physiological ideas consistent with animal spirits and sensibility. However, as political writers in the later decades of the century continued to discuss pleasure and pain, they slowly deemphasized the physiological basis. In particular, Jean-Paul Marat, William Godwin, and Jeremy Bentham each gave concerted analyses of pleasure and pain, and each partly maintained nerve theories and partly discarded them. Yet, with the lingering influence of earlier medical ideas about sensations and the mind, notions about the power of sexual feelings and desires were also carried forward into utilitarian and revolution-era political philosophy.

Embodying the crossovers between eighteenth-century philosophy, medicine, and politics, Marat theorized about how pleasure and pain function both in an individual’s body and the body politic. The Prussian-born Marat was first medically trained in Bordeaux and Paris, practiced in London, relocated to Newcastle upon Tyne, received a medical degree from St. Andrews University, and returned to France in 1776 to eventually participate in the Revolution, during which he was famously assassinated by Charlotte Corday.³²¹ His publications while in England were both medical and political, and included a well-received treatise on gonorrhoea.³²² Marat viewed pleasure and pain as quintessentially egalitarian qualities, which were shared by all, irrespective of class. These ideas informed deeply his republican stance. According to him, “Every mind is endued with the same faculties; in this respect, all are similar: but these faculties are more or less susceptible of improvement, and some have their peculiar propensities; but in these, all minds vary.”³²³ This analysis moved

³²⁰ Mackenzie, “Love of Pleasure,” 14.

³²¹ For the biography and medical history of Marat, see Clifford D. Conner, *Jean Paul Marat: Tribune of the French Revolution* (London: Pluto Press, 2012).

³²² This treatise is discussed more in chapter four.

³²³ Jean-Paul Marat, *A Philosophical Essay on Man* (London, 1773), 2: 100. cf. William Godwin, *An Enquiry Concerning Political Justice* (London, 1793), 2: 6. Godwin argued the following notion about how sensation affected the mind: “Mind is the creature of sensation; we have no other inlet of knowledge. What are the sensations that the lord experiences in his mother's womb, by which his mind is made different from that of the peasant? Is there any variation in the finer reticulated substance of the brain, by which the lord is adapted to receive clearer and stronger impressions than the husbandman or the smith?” Godwin’s view that each man was born equal in regards to sensibility was also represented in his character Caleb Williams. cf. Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation*, in *The Works of Jeremy Bentham* (New York: Russell & Russell, 1962 [orig. 1781]), 1: 21. Bentham also emphasized the role of sensations in forming the mind but stressed the relative differences among people: “But in the same mind such and such causes

away from the nature of mental faculties within an individual towards the nature of faculties within a population. Pain and pleasure became mechanisms for social and political change: “Sensible beings can only be affected by pleasure and pain. The soul therefore receives only two kinds of sensations, the pleasing and the painful.”³²⁴ His later advocacy of violent revolution reflected his notion of how to change people’s thinking. In this vein, Marat wrote that “painful sensations affect us incomparably more strongly than the agreeable.”³²⁵ Even with his political aims, his understanding and discussion of pleasure and pain was firmly situated in late seventeenth- and earlier eighteenth-century nerve and sensation discussions.

Yet, he vehemently criticized nerve physiologies, calling previous theories on “*the nervous fluid and the fibres of the brain*” mere “inventions.”³²⁶ He suggested that “brain functions so sublime” cannot be reduced to simple nerve anatomy.³²⁷ Nonetheless, he struggled with the idea of body/mind dualism and contended, like so many before him, that “there is a constant relation between the sensibility of the soul and that of the body, a determinate invariable relation.”³²⁸ Eventually, he conceded that “we are ignorant of the mechanism of the sensations” and proceeded to discuss pain and pleasure in terms of nerves, mechanics, and fluids.³²⁹ Even though he insisted that intellectual pleasures far exceeded physical,³³⁰ he qualified that the “lineaments which are dispersed in sensual enjoyments, are collected, or rather concentrated in our imaginary pleasures, and acquire force from this concentration, as the rays of light collected in the focus of a mirror.”³³¹ As suggested by Marat’s Newtonian image, the combined involvement of body and mind in sensual pleasures gave added influence. By his account, sensual pleasure and pain had a significant role in social and political discussions. Some English sympathizers with the Revolution held similar views, one such being Godwin.

When the French Revolution was in full-swing, Godwin published *An Enquiry Concerning Political Justice* (1793), not only as a response to developments on the

of pain or pleasure will produce more pain or pleasure than such or such other causes of pain or pleasure: and this proportion will in different minds be different.” Bentham made the argument that people have different capacities to feel, which did not oppose Marat’s or Godwin’s views, but rather specified the developed capacities of adults to feel and think, not innate or inherited capacities.

³²⁴ Marat, *Philosophical Essay on Man*, 1: 165.

³²⁵ Marat, *Philosophical Essay on Man*, 2: 103.

³²⁶ *Ibid.*, 2: 97.

³²⁷ *Ibid.*, 2: 97-8.

³²⁸ *Ibid.*, 2: 100.

³²⁹ *Ibid.*, 2: 104.

³³⁰ *Ibid.*, 2: 102. For Marat, impressions of senses were more powerful than the imagination. However, he thought that “when we compare the representations of fancy with those of nature, the brilliant paintings of love in the *Adonis* of *Marini*, with the merely physical pleasures of that passion, we are much more strongly affected by the former than by the latter.”

³³¹ *Ibid.*, 2: 103.

continent, but as an initial pattern for utilitarian philosophy.³³² Like Marat, Godwin postulated that “men’s actions are the creatures of their perceptions.”³³³ Carole Reeves supposes that, for “Godwin, what mattered for progress was mind control. The triumph of reason would render physical bodies redundant.”³³⁴ However, this summation does not entirely account for Godwin’s acknowledgement that the body’s condition dictated the mind’s.³³⁵ He asserted, “Health is undoubtedly in most cases the prerequisite of the best exertions of mind. But health itself is a mere negation, the absence of disease. A man must have experienced or imagined the inconveniences of sickness, before he can derive positive pleasure from the enjoyment of health.”³³⁶ Godwin thought that bodily experience wholly depended on the mind’s recognition. He also supposed that feelings, such as pleasure and pain, required bodily experience of those sensations in order to establish a relative scale of such feelings.³³⁷ Other utilitarians, as Reeves has suggested, were more deeply invested in ideas of physical sensations and reason, such as those proposed by Locke.³³⁸

The diminished importance of bodily feeling in Godwin’s ideas was directly opposed by the power Reverend Thomas Robert Malthus gave the body in determining population, politics, and economy. Malthus’s initial argument in his first publication, *An Essay on the Principle of Population* (1798), suggests the importance of bodily sexual inclinations. “I think I may fairly make two postulata,” he wrote, “First, that food is necessary to the existence of man. Secondly, that the passion between the sexes is necessary, and will remain nearly in its present state.”³³⁹ He viewed sex as irrational: an act controlled

³³² See Robert Lamb, “Was William Godwin a Utilitarian?” *Journal of the History of Ideas*, 70, no. 1 (Jan. 2009): 119-41.

³³³ Godwin, *Enquiry Concerning Political Justice*, 2: 6. For the many changes made in this section of Godwin’s treatise in subsequent two editions (1796 and 1798), see William Godwin, *Enquiry Concerning Political Justice and its Influence on Morals and Happiness*, ed. F. E. L. Priestley, vol. 3: “Critical Introduction and Notes” (Toronto: University of Toronto Press, 1946).

³³⁴ Carole Reeves, “Introduction: Enlightenment Bodies,” in *A Cultural History of the Human Body: In the Enlightenment*, ed. Carole Reeves (Oxford: Berg, 2010), 4: 11.

³³⁵ For the influence of Hartley’s writing on Godwin’s ideas about sensations and the mind, see Yallop, *Age and Identity*, 98.

³³⁶ Godwin, *Enquiry Concerning Political Justice*, 2: 44.

³³⁷ cf. Edmund Burke, *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful* (London, 1757), 3-4. According to Burke, “When I am carried from this state into a state of actual pleasure, it does not appear necessary that I should pass through the medium of any sort of pain.”

³³⁸ Reeves, “Introduction,” 11. Burke believed “that pain and pleasure are not only, not necessarily dependent for their existence on their mutual diminution or removal, but that, in reality, the diminution or ceasing of pleasure does not operate like positive pain; and that the removal or diminution of pain, in its effect has very little resemblance to positive pleasure.” Here he footnotes Lock’s *An Essay* as a cf. Burke, *Philosophical Enquiry*, 6.

³³⁹ Thomas Robert Malthus, *The Works of Thomas Robert Malthus*, vol. 1: *An Essay on the Principle of Population*, eds. E. A. Wrigley and David Souden (London: William Pickering, 1986 [orig. 1798]), 8.

by appetites and desires rather than reason. Sexual passion was innate and constant; yet, it could “rip up the fabric of society for momentary pleasure.”³⁴⁰ Whereas Godwin’s theory of perfectability afforded the mind an increasing stake in controlling and enjoying pleasure, Malthus further depicted pleasure as an inherent bodily force that was disruptive and uncontrollable. He insisted that there was no foundation to Godwin’s conjectures that “the passion between the sexes may in time be extinguished.”³⁴¹ Rather, Malthus stressed “the power of this passion to contribute to the sum of pleasurable sensations in life.”³⁴² “Perhaps there is scarcely a man,” mused Malthus, “who has once experienced the genuine delight of virtuous love, however great his intellectual pleasures may have been, that does not look back to the period, as the sunny spot in his whole life, where his imagination loves to bask, which he recollects and contemplates with the fondest regrets, and which he would most wish to live over again.”³⁴³ His conclusion about sexual pleasure was in line with the ideas of late seventeenth- and eighteenth-century medical writers. “A sensual pleasure, not attended with the probability of unhappy consequences, does not offend against the laws of morality: and if it be pursued with such a degree of temperance, as to leave the most ample room for intellectual attainments, it must undoubtedly add to the sum of pleasurable sensations in life.”³⁴⁴ Although not explicitly fixed to physiological ideas of nerves connecting the groin and brain, Malthus presumed a direct relationship between sexual sensations and intellectual abilities. However, the physiological vocabulary of animal spirits and nerves were discarded while the philosophical concern about sexual feeling impinging upon the mind, particularly reason, remained current.³⁴⁵ Malthus even summarized and affirmed Locke’s theory about how pleasure and pain are “the great stimulus to action in life.”³⁴⁶ Many other late eighteenth-century political philosophers also recognized Locke’s philosophy on sensations and gave special consideration to sexual feelings.

Utilitarianism openly affirmed the universality of pain and pleasure as the medium for all experience, both from external stimuli and within the mind, as was best set out by Locke:

³⁴⁰ Nicholson, “Eleventh Commandment,” 414. Dabhoiwala describes how for the “most orthodox and government observers” the writings of Malthus “seemed to provide scientific, incontrovertible proof that without ‘moral restraint’ (i.e. the confining of sex within marriage) demographic catastrophe and national decline would inevitable ensue.” Dabhoiwala, *Origins of Sex*, 353.

³⁴¹ Malthus, *Principle of Population*, 12.

³⁴² *Ibid.*, 76.

³⁴³ *Ibid.*

³⁴⁴ *Ibid.*, 77.

³⁴⁵ *Ibid.*, 78. Malthus also suggested, “It is probable therefore that improved reason will always tend to prevent the abuse of sensual pleasures, though it by no means follows that it will extinguish them.”

³⁴⁶ *Ibid.*, 125.

There is scarce any affection of our Senses from without, any retired thought of our Mind within, which is not able to produce in us *pleasure*, or *pain*. By *Pleasure* and *Pain*, I would be understood to signifie, whatsoever delights or molests us; whether it arises from the thoughts of our Minds, or any thing operating on our Bodies.³⁴⁷

This reduction of all experience, whether physical or mental, to sensations arose again later in Bentham's writing. Bentham began his 1781 treatise *An Introduction to the Principles of Morals and Legislation* by setting out this overarching binary, which is worth quoting at length:

Nature has placed mankind under the governance of two sovereign masters, *pain* and *pleasure*. It is for them alone to point out what we ought to do, as well as to determine what we shall do. On the one hand the standard of right and wrong, on the other the chain of causes and effects, are fastened to their throne. They govern us in all we do, in all we say, in all we think: every effort we can make to throw off our subjection, will serve but to demonstrate and confirm it. In words a man may pretend to abjure their empire: but in reality he will remain subject to it all the while. The *principle of utility* recognizes this subjection, and assumes it for the foundation of that system, the object of which is to rear the fabric of felicity by the hands of reason and of law.³⁴⁸

Pain and pleasure as motivations for human behaviour were, as Bentham wrote, "The *principle of utility*." The similarity in imagery, terms, and rhetoric to late seventeenth-century imaginings of animal/rational dualism is uncanny. Like Locke, Bentham equated pleasure and pain to right and wrong.³⁴⁹ Like Willis, he employed imperial imagery to emphasize how senses embattled Reason. Further reminiscent of Locke, Bentham discussed both simple and complex sensations, distinguishing how some pleasures were less good because they were short-lived, and categorizing feelings in other ways.³⁵⁰ Like Charleton, Bentham demonstrated an interest in Epicurean philosophy, as instanced by a short defence

³⁴⁷ Locke, *An Essay*, 52.

³⁴⁸ Bentham, *Introduction*, 1.

³⁴⁹ cf. Pouilly, *Theory of Agreeable Sensations*, 47. According to Pouilly, "The human soul is susceptible of love and hatred, and it is by these passions that we are strongly attached to what seems to be our good, while, at the same time, we reject or fly from what appears to be the contrary; these are the two springs which put all our faculties in motion."

³⁵⁰ See Jonathan Riley, "On Quantities and Qualities of Pleasure," *Utilitas* 5, no. 2 (1993): 291-300. Hartley also categorized pleasures and pains, similar to Bentham. Hartley, *Theory of the Human Mind*, 2: 292.

of it in his treatise.³⁵¹ Yet, Bentham refrained from discussing these theories in outright physiological terms.

Whereas other utilitarians carefully sidestepped explicit sexual topics in their pain and pleasure discussions, Bentham took cues from Willis and Locke and broached the topic. Yet while he directly addressed pain and pleasure in physical and sexual senses, Bentham showed a distinct unease at relying on the physiological terms that had dominated the past century's discussions on that topic. In categorizing the various "pleasures of sense," he listed the "pleasure of the sexual sense" followed by the "pleasure of health: or, the internal pleasureable feeling or flow of spirits (as it is called), which accompanies a state of full health and vigour."³⁵² The hesitation in making this single physiological comment in the treatise reflects the faltering credibility of animal spirits at that time. With its physiological core dissolved, discussions of pain and pleasure were given new meanings and became less immediately interested in the mind/body relationship. Like Marat, Bentham projected examples of individual experience and sensation onto larger social contexts: "It is in vain to talk of the interest of the community, without understanding what is the interest of the individual. A thing is said to promote the interest, or to be *for* the interest, of an individual, when it tends to add to the sum total of his pleasures: or, what comes to the same thing, to diminish the sum total of his pains."³⁵³ Yet, even with this extrapolation from individual to community, the kind of pleasure and pain that had most influence was physical.

Bentham contended that there "are four distinguishable sources from which pleasure and pain are in use to flow: considered separately they may be termed the *physical*, the *political*, the *moral* and the *religious*."³⁵⁴ He further distinguished that, of those four, "the physical is altogether, we may observe, the ground-work."³⁵⁵ This attention to the physical briefly brought physiological theories about sexual pain and pleasure back into play. Bentham used "the pleasures of the sexual sense" to examine how social consequences altered perceptions of the same physical desire.³⁵⁶ By comparing a man ravishing a virgin with a man exercising "the rights of marriage," he argued that while both men had the same motive of sexual desire, yet the terms attached to those desires were different. The former man had lust, or any number of negative names for that physical desire, whereas the latter man could only be described as having desire, a neutral term used due to the absence of positive terms available for sexual proclivities. As David Turner has suggested, "Language

³⁵¹ Bentham, *Introduction*, 12. For the connection between Bentham and Epicureanism, see Geoffrey Scarre, "Epicurus as a Forerunner of Utilitarianism," *Utilitas* 6, no. 2 (1994): 219-31.

³⁵² Bentham, *Introduction*, 17-8.

³⁵³ *Ibid.*, 2.

³⁵⁴ *Ibid.*, 14.

³⁵⁵ *Ibid.*, 15.

³⁵⁶ *Ibid.*, 50.

has always been a site of contest in the construction of the social and moral meanings of sexual transgression.³⁵⁷ Even the notoriously libidinous Boswell feigned blushes about mentioning sexual pleasure: “*Pleasure*, which commonly suggests at first the idea of sensual gratification, so that to pronounce the word Pleasure by itself would alarm the delicate sensibility of a very modest lady.”³⁵⁸ Bentham’s criticism of this social and moral failing, which he labelled “those rhapsodies of common-place morality,”³⁵⁹ did little to remediate it. In his view, sexual pleasure had the unique distinction of being “the only immediate pleasure worth regarding, which any one can reap from the person of another, and which at the same time is capable of affecting the reputation of the latter.”³⁶⁰

Bentham’s discussion of sexual pleasure rarely moved out of the moral and political, and into the physiological. Yet, notably, one of the few other instances he referred to physiological notions related to the difference in sensibility between males and females.³⁶¹ His comment recalled earlier physiological accounts about females’ sensibility and sexuality, such as that made by the anatomist, Nicolas Charles Jenty: “But when a Woman is in a Love Passion, I think it is [not]³⁶² in her Power to be very sensible what she does. Besides, in that State the Orifice of the Womb descends into the Vagina, more or less.”³⁶³ While physiological terms had dropped from discussions of pain and pleasure, many of the theoretical connections, as instanced by sensibility, remained intact.

Conclusion

The nature of pleasure and pain were integral to seventeenth- and eighteenth-century ideas about animal spirits and nerves connecting the organs of generation and the mind. Notions of sexual desire, passion, and behaviour relied on those sensations. From the late seventeenth century and through the eighteenth, many intellectuals were interested in how sexual sensations affected human thought, and especially the ability to reason. Medical advice emphasized the significant impact sexual feelings, particularly when heeded in excess, had on individuals’ mental and physical health.

During the Romantic era new literary genres, terms, and theories developed to explore and explain sexual experience. Erotic literature continued to engage medical

³⁵⁷ Turner, *Fashioning Adultery*, 23.

³⁵⁸ Boswell, “On Pleasure,” 211. “Even now, when I treat professedly of Pleasure, I shall hold it as my duty to say nothing of the highest sensual pleasure permitted to us, which Vernet in his *Tableau de l’amour conjugal*, tells us has been considered by a Christian saint, as a foretaste of the happiness of heaven” (212).

³⁵⁹ Bentham, *Introduction*, 55.

³⁶⁰ *Ibid.*, 185.

³⁶¹ *Ibid.*, 52-3.

³⁶² A reader of the manuscript has inserted this notation to correct for the intended meaning.

³⁶³ Charles Nicholas Jenty, *A Course of Anatomico-Physiological Lectures on the Human Structure and Animal Oeconomy...* (London: printed for James Rivington and James Fletcher, 1757), 325.

discourse, as evidenced by the adoption of electric theories about venereal pleasure and pain, but *Fanny Hill* remained unparalleled in its attention to the physiology and philosophy of sex.³⁶⁴ Toward the end of the eighteenth century, literary authors focused more on intellectual pleasures, such as aesthetics, lessening the power of sensible bodies. Sexuality still lurked behind the words and phrases used to discuss pleasure and pain, but in different, perhaps less overt, ways.

Yet, the physiology of nerves initially influenced the literary focus on intellectual pleasures too. For instance, Hartley described the physiological pleasure of aesthetic experiences, like the sublime: “If there be a precipice, a cataract, a mountain of snow, &c. in one part of the scene, the nascent ideas of fear and horror magnify and enliven all the other ideas, and by degrees pass into pleasures, by suggesting the security from pain.”³⁶⁵ This aesthetic feeling for landscapes also applied to human bodies. Hartley expounded how “the word *beauty* is applied to the person, particularly in the female sex, in an eminent manner; and the desires and pleasures arising from beauty, in this sense, may be considered as an intermediate step between the gross sensual ones, and those of pure esteem and benevolence.”³⁶⁶ Likewise, the aesthetic pleasures of the Romantics were ever only a few steps removed from sexual pleasures. But without the attention to nerves and physiology, the sexual experiences described tended to be less material and immediate.

Changes in gender politics corresponded to new medical ideas about sexual pleasure in the late eighteenth and early nineteenth centuries. The emergence of different roles and identities for Georgian men and women, as Amanda Vickery suggests, were bound to kinds of gendered representations in print culture.³⁶⁷ But, that gendering in domestic life and print culture also corresponded to drastic changes in how sexual pleasure was conceived. Ideas about nerves were more gendered in the late eighteenth century,³⁶⁸ as was sexual pleasure. Medics and natural philosophers stopped debating about which sex had greater pleasure, and female orgasms became understated, even erased, in such discussions.³⁶⁹ Angus McLaren observes, “as a consequence of the elaboration of more sophisticated models of reproduction in the later 1700s the rights of women to sexual pleasure were not enhanced but eroded.”³⁷⁰

³⁶⁴ Cleland, *Fanny Hill*, 131-2.

³⁶⁵ Hartley, *Theory of the Human Mind*, 2: 253.

³⁶⁶ *Ibid.*, 260. cf. *Aristotle's Last Legacy*, 88. According to the *Aristotle's* advice, before copulating to procreate “let their Animal and Vital Spirits be powerfully exhilarated by some briskly and Restoratives: And let 'em, to invigorate their Fancies, survey the lovely Beauties of each other, and bear the bright Ideas of them in their Mind.”

³⁶⁷ Amanda Vickery, *The Gentleman's Daughter: Women's Lives in Georgian England* (New Haven: Yale University Press, 1998), 3.

³⁶⁸ Barker-Benfield, *Culture of Sensibility*, xvii-xviii.

³⁶⁹ *Ibid.*, 42.

³⁷⁰ Angus McLaren, *Reproductive Rituals: The Perception of Fertility in England from the Sixteenth to the Nineteenth Century* (New York: Methuen, 1984), 146. For a discussion of

Sexual pleasure no longer occupied as prominent a role in physiological understandings of reproduction or in sensibility.

Anxieties about the destabilizing effects of indulging pleasure continued. More gendered tropes about the barbarity of irrational and lustful men and the weakness of delicate, passionless women perpetuated. However, Epicureanism and libertinism were predominantly eighteenth-century modes, and moral-medical writings became less explicit about sexual experiences. Even utilitarianism's interest in venereal pleasure and pain, although remarkable, was never central. The discredit of animal spirits correlated with a shift in theories about the mind/body relationship from an emphasis on the influence of bodily sensations to that of the intellectual mind. That shift is evident in Godwin's argument that human minds could gain total control of the body, and heighten intellectual pleasures to the full exclusion of sensual. Godwin's theory ran counter to the importance the culture of sensibility gave to bodily, especially sexual, sensations as determinants of thought, feeling, and action. Sexual pain continued as a pathological issue and pleasure remained in medical advice and erotic texts but, generally, sexual pleasure faded as a medical topic until late nineteenth-century sexologists and psychologists like Havelock Ellis and Sigmund Freud. The idea that sensations from the genitals induce mental changes would never again be so widely discussed and recognized as normal. The reverse influence—the mind affecting the state of the organs of generation—was also a significant concern in eighteenth-century medical discussions, as the following chapter explores in its analysis of sexual pathologies.

passive women and reproduction in late eighteenth-century thought, see Nicholson, "Eleventh Commandment," 410.

**TABLE OF THE SIGNS
WHICH INDICATE
PUCELAGE AND DEFLORATION.**

<i>Indications of Pucelage.</i>	Names of the Parts from whence these in- dications are drawn.	<i>Indications of Defloration.</i>
Fine and erect . . .	<i>The eyes</i> . . .	Sad and downcast.
Fine and white . . .	<i>The whites of dis-</i>	Tarnished.
White and smooth . . .	<i>The face</i> . . .	Freckled.
Fleshy	<i>The nose</i>	Lean and thin.
Clear and pleasant	<i>The voice</i>	Very harsh.
Good	<i>The appetite</i>	Bad.
Slender and thin	<i>The neck</i>	Thicker.
Middling	<i>The breast</i>	Larger.
White	<i>The nipples</i>	Dark red.
Clear	<i>The urine</i>	Thick.
Narrow	<i>Her stream</i>	Large.
Smooth	<i>The hair of the penis</i>	Shifted.

Fig. 3.1 A table from Lignac's *A Physical View of Man and Woman in a State of Marriage* (1798), which lists outmoded ways of reading sexual experience in the appearance of young females.

Chapter Four: Disorderly Spirits—Sexual, Reproductive, and Mental Maladies

In the preface to *Tales to Kill Time: or, a New Method to Cast Off Care, and to Cure Melancholy, Vapours, and all Hypochondriacal Complaints* (1757), the anonymous editor identifies himself as “a Man many Years subject to the Hyp, and other Disorders bordering upon Insanity.” Out of sympathy for his fellow “Hyp” sufferers, he offered the collection of diverting verse as a therapeutic read intended to quell troublesome passions when they arose. Included in this book is a poem entitled “The Hyp-Doctor; or, the Chamber-Maid Discarded,” which tells of a man named Maggot, a physician and hypochondria specialist. One day while Maggot is away from home, his chambermaid uses his chamberpot. Upon return, Maggot notes the filled vessel and—as one committed to his vocation—inspects the contents for colour and taste. His diagnosis is remarkably accurate: he is a woman. With this startling revelation in mind, his imagination gets the better of him.

He fancy'd now his belly rose,
And now he feels a mother's throws.¹

Luckily for Maggot, he discovers the chambermaid's wrongful use of his personal jordan before enduring “The *search* of midwife's groping hand.”² The credulous doctor's taste of his own medicine comically warned readers against being consumed by medical concerns and taken in by quackish practices. But, like other verses in the collection, “The Hyp-Doctor” also speaks to the prominent mid-eighteenth-century perception that generation was transformative, powerful, and often disruptive, especially in relation to the mind. Whereas Maggot's hypochondria did not involve directly his genitalia, sexual and reproductive maladies, disorders, and anomalies often involved the organs of generation, the brain, and nerves in conjunction.

“Nothing is more revealing of a society than the history of its diseases, particularly its ‘social’ diseases,”³ Claude Quétel asserted in his landmark text on the history of syphilis.⁴ In many ways gonorrhoea, pica, maternal impressions, and febricula fit Quétel's interpretation better than syphilis. Even with Quétel's emphasis on society in constructing the history of sexual diseases, historians have typically provided reductionist accounts

¹ Society of the Court of Comus, “The Hyp-Doctor; or, the Chamber-Maid Discarded,” *Tales to Kill Time; or, a New Method to Cast Off Care, and to Cure Melancholy, Vapours, and all Hypochondriacal Complaints* (London: printed for R. Baldwin, 1757), 111.

² *Ibid.*, 112.

³ Claude Quétel, *History of Syphilis*, trans. Judith Braddock and Brian Pike (Cambridge: Polity Press, 1990), 2.

⁴ Linda E. Merians, introduction to *The Secret Malady: Venereal Disease in Eighteenth-Century Britain and France*, ed. Linda E. Merians (Lexington: University Press of Kentucky, 1996), 9. According to Merians, Claude Quétel's “is the most important modern work devoted to the history of venereal disease in Europe from the late fifteenth to the late twentieth centuries.”

focused on the social impact of and medical responses to specific sexual diseases rather than how those maladies fit into wider social discussions and cultural understandings. As I show in this chapter, views of these sexual and reproductive maladies hinged upon perceptions, anxieties and concerns specific to the culture of sensibility. Those maladies pertained most directly to genteel society, which responded to literary modes, affected refined manners, and accessed fashionable medical advice and practitioners. Further, medical perceptions about those maladies entirely depended upon the framework of animal spirits and sensibility. Other diseases have been connected to the culture of sensibility. For instance, John Mullan shows that “eighteenth-century writings on hypochondria, hysteria and nervous disorder” participated in sensibility.⁵ He also indicated that “the terms and categories” used by mid-century fashionable nerve doctors derived “from the seventeenth-century works of Willis and Sydenham.”⁶ However, although the medical writings Mullan drew upon frequently mention animal spirits, he did not. As Malcolm Flemying insisted, Animal spirits as the “impetum faciens, or active fluid, hath a very large share of influence on the disorders of the animal machine.”⁷

Understandings and treatments of sexual and reproductive maladies have yet to be connected to sensibility. As “The Hyp-Doctor” instances, disorders related to generative bodies were often linked to the nervous and mental disorders specific to sensibility, like hypochondria and hysteria. Thoughts, passions, and behaviours could affect generation and the health of genitalia. Conversely, disorders of the genitals were believed to affect the mind, and not just in cases of neurosyphilis. These shared disorders between the mind and genitals were overwhelmingly understood as communicated by the animal spirits. Through the examples of maternal impressions, pica, febricula, and gonorrhoea, this chapter explores how mental and sexual disorders were coupled by nerve physiology and sensibility, especially in mid-century medicine and literature.

This analysis not only shows the pathological side of eighteenth-century sexuality and sensibility, but also reveals how medical discussions of these pathologies were gendered. Many cultural historians have portrayed eighteenth-century nervous disorders to be more particular or even unique to females. However, there was “a male equivalent of hysteria, designated as hypochondria,”⁸ and these diseases’ “symptoms were not ostensibly

⁵ John Mullan, “Hypochondria and Hysteria: Sensibility and the Physicians,” *The Eighteenth Century* 25, no. 2 (1984), 141.

⁶ *Ibid.*, 144.

⁷ Malcolm Flemying, *The Nature of the Nervous Fluid, or Animal Spirits, Demonstrated...* (London: printed for A. Millar, 1751), preface: xix.

⁸ *Ibid.*, 146. See also Dolores Peters, “The Pregnant Pamela: Characterization and Popular Medical Attitudes in the Eighteenth Century,” *Eighteenth-Century Studies* 14, no. 4 (1981): 432-51. According to Peters, hypochondriasis referred to the male illness and hysteria to the female, although “the diagnosis was the same for both men and women” (439).

gender-linked.”⁹ In the eighteenth century, hysteria no longer meant specifically a wandering womb and hypochondria did not yet mean specifically anxieties about imagined ailments.¹⁰ Both sexes were susceptible to having their mental and rational capacities utterly disordered by nervous disease, although “a distinctive profile of the hysteric woman emerges,”¹¹ as it does for the hypochondriac man. While debilitating maladies, hypochondria and hysteria were also somewhat desirable as they signalled an individual’s capacity for feeling and intellect.¹² Through the nerves, hysteria and hypochondria contributed to and resulted from sexual and reproductive disorders. Symptoms of those mental illnesses related distinctly to the signs of sensibility: dazes, pallor, fainting, deliriums, tears, moods, and moments of impressionability.

Those scholars who have examined syphilis in eighteenth-century Britain have predominantly discussed either the progressively biomedical understandings of sexual disease or the social changes related to that disease, often with some attempt at historical comparisons with HIV/AIDS.¹³ Gonorrhoea specifically, and especially before bacteriology, has been little discussed. As part of venereal disease and the subject of many treatises, tropes, and treatments, gonorrhoea is deserving of focused historical study. However, the historiography on syphilis has illuminated some key issues useful here, such as venereal disease as “one of early modern Europe’s most significant cultural markers”¹⁴ and how social and gender attitudes were expressed through medical perspectives and practices concerning that illness.¹⁵ One Georgian surgeon described how the military “furnished me daily with a number of objects laboring under this dreadful malady, from the slightest infection to its most malignant state.”¹⁶ The surgeon Martin Bree emphasized the many

⁹ Peters, “Pregnant Pamela,” 439.

¹⁰ See Mullan, “Hypochondria and Hysteria,” 152.

¹¹ Peters, “Pregnant Pamela,” 439. Peters also observed, “Women could not always be held accountable for their conduct...their capacity to exercise their mental faculties, to reason, could not always be taken as reliable” (440).

¹² *Ibid.*, 142, 145, 146.

¹³ For this historical comparison, see Quénel, “Conclusion: From Syphilis to AIDS,” in *History of Syphilis*; John Parascandola, *Sex, Sin, and Science: A History of Syphilis in America* (Westport: Praeger Publishers, 2008).

¹⁴ Kevin Siena, “Introduction,” in *Sins of the Flesh: Responding to Sexual Disease in Early Modern Europe*, ed. Kevin Siena (Toronto: Centre for Reformation and Renaissance Studies, 2005), 8.

¹⁵ E.g. Merians describes how venereal disease “was often used, literally or metaphorically, to represent the utterly corrupt, the unromantic, the unpatriotic, the ungovernable.” *Secret Malady*, 2.

¹⁶ J. H. Smyth, *A New Treatise on the Venereal Disease, Gleets, Seminal Weaknesses; the Dreadful Effects of Self-Pollution, and the Cause of Impotency*, 5th ed. (London, 1771), 2.

dangerous cases of sexual disease among sea-faring men.¹⁷ As the anonymous author of the lewd and horticulturally themed poem “The Natural History of the *Arbor Vitæ*” cautioned,

These venomous *Vulvariae*
Spread wide in great Variety.
Search but this spacious Town about,
You’ll find few Gardens are without.¹⁸

A common perception reiterated in these lines was that females, particularly prostitutes, were the vehicle of the sexual contagion and corruption. This bias reflected medical observations and the social, moral, and gender perceptions relating to sexual disease and behaviour of *fallen* women.

In contrast to maternal impressions, pica, and febricula, which were predominantly female disorders, discussions about gonorrhoea and gleans tended to focus on male sufferers. According to John Hunter, gonorrhoea in women was “not so complicated as in men,” since they were less symptomatic and their infections often went unnoticed or were confused with the fluor albus.¹⁹ This confusion also worked in reverse; Charles Armstrong suggested that fluor albus was “a complaint women are very liable to: and as the fair-sex are always unwilling to think themselves injured by their greatest favourite, and often give strange accounts of their complaints, practitioners may sometimes be deceived in cases of this kind.”²⁰ Sensitivity to possible infidelity swung in the other direction too: “It has often happened, that chaste matrons have been stigmatized with crimes, or else suspected their husbands, though both innocent; which has taken its rise from nothing else than uncleanliness, particularly at the time of an acute fluor albus, in an acrimonious habit of body.”²¹ More often than misdiagnosis, and more often than with men, women were “unaware they had the disease, and so they were often unknowing carriers of it.”²²

¹⁷ Martin Bree, *Observations Upon the Venereal Disease, with some Remarks on the Cure of Barrenness, Impotence, and certain Disorders Incident to Either Sex* (London, 1780), 6.

¹⁸ “The Natural History of the *Arbor Vitæ*...,” in *The Works of the Earls of Rochester, Roscomon, and Dorset: the Dukes of Devonshire, Buckinghamshire, &c* (London, 1777), 2: 166.

¹⁹ John Hunter, *A Treatise on the Venereal Disease* (London, 1786), 62. See William Cockburn, *The Symptoms, Nature, Cause, and Cure of a Gonorrhoea* (London, 1713), 5, which also comments on the difficulty in distinguishing gonorrhoea from the whites or fluor albus in women. Fluor albus is also known as the whites, leucorrhoea, or, a term which Robert Johnson used, *Albae mulierum fluxiones*. See Robert Johnson, *Enchiridion Medicum, or, a Manual of Physick being a Compendium of the Whole Art* (London, 1684), 237. Some practitioners, such as Charles Armstrong, considered fluor albus to be a debilitating condition in its own right.

²⁰ Charles Armstrong, *An Essay on the Symptoms and Cure of the Virulent Gonorrhoea in Females* (London: Charles Dilly, 1783), 13. See also Daniel Turner, *A Discourse Concerning Gleans...* (London: John Clarke, 1729), 3.

²¹ Nikolai Detlef Falck, *A Treatise on the Venereal Disease...* (London, 1772), 28.

²² Merians, *Secret Malady*, 8.

Nonetheless, a few authors focused their writings about venereal disease and specifically gonorrhoea on women, such as the man-midwife William Smellie.²³ This discrepancy in attention paid to the two sexes also prompted Armstrong to suggest that “*among the numerous treatises, and essays, that have been published on the venereal diseases, we have not one professedly written on the appearances and cure of this disease in Females, though they are equally obnoxious with the other moiety of the creation, to the effects of venereal infection.*”²⁴ Of course, his text sought to remediate that glaring omission and to capitalize on that gap in the market. Yet, most medical authors agreed that the effects of venereal disease and gonorrhoea could be equally detrimental to either sex.²⁵

The female and male pathologies discussed in this chapter suggest broader concerns about how the rational mind was susceptible to influence from sexuality.²⁶ Through the genitalia’s significant influence on the animal spirits, sexual diseases adversely affected the constitution, even to the point of chronic disability or death. All four of these above mentioned pathologies instance the link between physiologies of animal spirits, sexual reproduction, and culture of sensibility. The first section on maternal impressions reveals how animal spirits enabled theories about pregnant women’s thoughts physically marking their fetuses. The subsequent section explores the reverse relationship: how gravid female bodies caused animal spirits to conjure desires and appetites in cases of pica. The third section shows how the mid-century pathology called febricula was understood as resulting from gravid wombs in women with sensible constitutions. With more attention to male sufferers, the fourth section examines how gonorrhoea was understood to negatively affect animal spirits, which caused various mental sequelae. Recognizing the centrality of animal spirits in these maladies allows an understanding of sexual disorders that goes beyond the biological perspectives still dominant in the historiography of eighteenth-century sexual diseases, especially syphilis.

Maternal Impressions

When in the Womb the Forming Infant grows,
And Swelling Beauties shew a Teeming Spouse;
All Melancholly, Spleen, and anxious Care,
All Sights Obscene, that shock the Eyes, forbear,
But a fair Picture, and a beauteous Face,

²³ William Smellie, *A Treatise on the Theory and Practice of Midwifery*, 4th ed. (London, 1762), 1: 165-7.

²⁴ Armstrong, *Virulent Gonorrhoea*, preface.

²⁵ See Falck, *Venereal Disease*, 28. Falck emphasized this equality in describing the pathologies of each sex. He analogized male phimosis and paraphimosis in men with venereal ulcers experienced on the labia in women.

²⁶ cf. Mullan, “Hypochondria and Hysteria,” 142.

By Fancy's mighty Pow'r, refine the Race.
 The Spirits to the Brain the Form convey,
 Which thence the Seed receives, while Nature works her way.
 On ev'ry Part th' Imprinted Image stays,
 And with the *Fætus* grows the borrow'd Grace.
 Strong are the Characters which Fancy makes,
 And good, and bad, the ripe Conception takes.²⁷

The first London publication of *Callipædiæ*, an extended poem originally published in 1655 by the French abbot Claude Quillet, was done in Latin in 1708, with an English translation following two years later, and several editions after that. Quillet's poem offered thousands of lines of advice—ranging from medical to astrological—on how to engender good-looking and healthy children. The lines quoted above detail one of the most frightfully dramatic causes of children being born “good, and bad.” Maternal impressions involved the imagination of a sensible pregnant woman being poignantly altered by a singular occurrence or thought. This caused a physical impression of the mother's mental experience to be left on the fetus—a kind of transcription, from thought to body. This transcription happened as “The Spirits to the Brain the Form convey” images from the imagination to the fetus, or seed as Quillet suggested.

An extensive amount continues to be written about the history of this medical phenomenon, especially in relation to the Mary Toft affair (an event so well covered by historians that it does not need detailing here).²⁸ Much of this historiography interprets the idea of maternal impressions as indicative of prevailing eighteenth-century medical attitudes about pregnant females' bodies and minds as susceptible and ungovernable.²⁹ Although

²⁷ Claude Quillet, *Callipædiæ; or, an Art how to have Handsome Children*, trans. St. Marthe (London: John Morphew, 1710), 70. A notably different translation of *Callipædiæ* was also published in 1710 by Bernard Lintott and translated “By several hands.”

²⁸ For analysis of the written discussions on maternal impressions, see Glenda Leslie, “Cheat and Impostor: Debate Following the Case of the Rabbit Breeder,” *The Eighteenth Century* 27, no. 3 (1986): 269-86; Philip K. Wilson, “‘Out of Sight, Out of Mind?’: The Daniel Turner-James Blondel Dispute Over the Power of the Maternal Imagination,” *Annals of Science* 49, no. 1 (1992): 63-85; Jane Shaw, “Mary Toft, Religion and National Memory in Eighteenth-Century England” *Journal for Eighteenth-Century Studies* 32, no. 3 (2009): 321-339; Dennis Todd, “Three Characters in Hogarth's *Cunicularii* and Some Implications” *Eighteenth-Century Studies* 16, no. 1 (1982), 26-46; Lisa Forman Cody, “The Politics of Reproduction: From Midwives' Alternative Public Sphere to the Public Spectacle of Man-Midwifery,” *Eighteenth-Century Studies* 32, no. 4 (1999): 477-495.

²⁹ In discussing maternal impressions, Margrit Shildrick suggests that “the intellectual underpinnings of Malebranche's accounts are the familiar gendered motifs of the early modern period. Women are essentially irrational, rooted in a determinate bodyliness, unable to maintain a proper distance between subject and object, and not fully agents of their own will.” “Maternal Imagination: Reconceiving First Impressions,” *Rethinking History: The Journal of Theory and Practice* 4, no. 3 (2000), 248. Shildrick also observes that maternal

pregnancy was associated with these qualities, and fetal impressions were more common to mothers, males also experienced such psychosomatic disorderliness involving acts of generation (e.g. Maggot's fancy-driven pregnancy). Further emphasizing the similarities between female and male mind/generation anomalies, eighteenth-century discussions regularly likened maternal impressions to hypochondria. As one commentator wrote, "The common Effects of *Imagination* in the *Hypochondriacs* are so surprising, and notorious, that we have no need to be astonished at those of a Mother's."³⁰ Yet, this link between the organs of generation and the mind seemed especially present in pregnant women, as instanced by maternal impressions as well as by pica and febricula.

Maternal impressions were, therefore, just one example of the organs of generation and the mind mutually—and pathologically—affecting each other through disturbances in the animal spirits. The foremost historian of the Mary Toft affair, Dennis Todd, emphasizes that "the imagination was the only faculty that could effectually participate in the kind of psycho-physiological processes that prenatal influence presupposed."³¹ However, as discussions before and after the Mary Toft affair explicitly stated, animal spirits communicated outward influences to the mind, caused passions, affected the imagination, and conveyed those disturbances to the fetus, producing spectacular irregularities. It was not the imagination that crossed "from sense to intellect" and "from mind to body,"³² it was animal spirits. The debates the raged in the mid-century about maternal impressions centred on whether animal spirits flowed between maternal and fetal bodies. Without that physiological and nervous connection, a mother's thoughts or feelings could not mark a fetus.

The Mary Toft affair spurred Dr. James Blondel to anonymously publish *The Strength of Imagination in Pregnant Women Examined* in 1727. This tract was a thinly veiled refutation of the twelfth chapter of Dr. Daniel Turner's treatise on skin diseases, *De Morbis Cutaneis*. The ensuing printed debate "made no small Noise, for the Time, in the

impression "plays right into a deep seated human anxiety about proper paternal origins, and into a masculine fear of women's procreative power" (249).

³⁰ J. H. Mauclerc, "The Power of Imagination in Pregnant Women Discussed," in *Eighteenth-Century British Midwifery*, ed. Pam Lieske (London: Pickering & Chatto, 2007 [orig. 1740]), 1: 1: 359. See also Daniel Turner, "Of Spots and Marks...Imprest Upon the Skin of the Foetus, by the Force of the Mother's Fancy," in *De Morbis Cutaneis*, 3rd ed., in *Eighteenth-Century British Midwifery*, ed. Pam Lieske (London: Pickering & Chatto, 2007 [orig. 1726]), 1: 1: 243. Turner described, "The wild Conceits of some Hypochondriacks, and the strange Force of Imagination in them."

³¹ Dennis Todd, *Imagining Monsters: Miscreations of the Self in Eighteenth-Century England* (Chicago: University of Chicago Press, 1995), 52.

³² *Ibid.*, 59. Todd further comments, "The imagination, precisely because it was an intermediary between the material and immaterial realms, preserved a comfortable distinction between the body and the mind" (63).

learned World.”³³ There were, as Todd suggested, “sound intellectual reasons for not dismissing” Mary Toft’s claims.³⁴ Eighteenth-century physiological ideas about generation, animal spirits, and the mind allowed such psychosomatic phenomena, which Turner had written about over a decade before Toft’s hoax. Whether or not maternal impressions were possible relied, as the Turner-Blondel debate shows, on whether maternal animal spirits flowed into or around the fetus. Turner believed in a shared maternal-fetal circulation, Blondel did not.³⁵ The nature of placental circulation was still being resolved by anatomical experiments with injections. There was a significant medical interest in how mental conditions expressed themselves outwardly on bodies, as in theories about physiognomy. But in learned circles, maternal impressions became defunct when the blood barrier between mother and fetus was widely demonstrated and established in the late eighteenth century, at the same time that animal spirits were quickly losing credibility.

Turner’s chapter on maternal impressions detailed how maternal impressions happened, summarized several historic medical reports of that phenomenon, and explained what little could be done to remedy such markings on children. These markings included claret-coloured blotches, pebble-patterned speckles, patch-black spots, and growths like “Fruits, or Foods desir’d but not obtain’d.”³⁶ But, crucially, Turner began his chapter by elaborating on “the Passions of the Soul in general.”³⁷ His explanation of the passions revolved around how “the mutual Tye and Commerce betwixt the sensitive Part of Man, or that Corporeal Soul common to him with Brutes (for the Superior called Rational, we have nothing to say here) that according to the Presentment of outward Objects, it is variously affected.”³⁸ He continued to relate “the great Influence of those Passions over our Blood and nervous Fluid, or animal Spirits, and consequently the whole Body: Or the mutual Commerce it hath pleas’d our Maker to establish between outward Objects and the said Spirits.”³⁹ Turner attributed this explanation of how passions derived from “outward

³³ Mauclerc, “Power of Imagination,” 336.

³⁴ Todd, *Imagining Monsters*, 44.

³⁵ cf. George Rousseau, “Praxis 2: Pineapples, Pregnancy, Pica and Peregrine Pickle,” in *Enlightenment Borders: Pre- and Post-Modern Discourses: Medical, Scientific* (Manchester: Manchester University Press, 1991), 184. Rousseau suggests that “unlike Blondel, Turner was not concerned with the physiological processes by which the foetus was actually ‘marked’.” In reading Turner’s accounts, however, Rousseau’s interpretation is evidently incorrect. Turner explored in great depth the physiological processes by which animal spirits roused by minds affect bodies, and the placental connection between mother and fetus.

³⁶ Turner, “Spots and Marks,” 258.

³⁷ *Ibid.*, 231.

³⁸ *Ibid.*

³⁹ *Ibid.*, 235.

Objects” to the writings of René Descartes and, more significantly, Thomas Willis.⁴⁰ In fact, the beginning pages of Turner’s tract are entirely occupied with explaining the “strict Union ‘twixt the sensitive Soul and nervous Fluid or Spirits, its Instruments,”⁴¹ with very little to say about the faculty of imagination. Turner admitted that “the internal Transactions” of this animal spirit physiology were little known and that one “cannot perfectly demonstrate how it comes to pass;” yet, the effects of the passions were observable and well known.⁴² “Why, for Instance, at the Approach of a long absent and dearly beloved Friend, my Soul is thus elated, my Spirits flying as it were naturally into those Muscles of my Face, which frame the smiling and joyful Aspect? On the other Side, how it comes to pass upon the Sight of a Thief or Ruffian, the same Spirits retire and leave me pale and sad.”⁴³ Turner further connected sense, animal spirits, bodily effects, and imagination by suggesting the following scenarios: “Thus also the Imagination of a joyful Matter causeth a pleasant and serene Countenance; of any Thing shameful, seen or thought of, Blushing. I need not say what lustful Thoughts produce, or how soon and strangely this Faculty employ’d about them, does affect the Genitals”⁴⁴ He, of course, was saying something about the genitals being aroused by dirty thoughts and animal spirits. Such displays of the passions and imagination were demonstrations of animal spirits in action, and in keeping with the principles of sensible bodies and minds.

Although held with a degree of incredulity, discussions about maternal impressions instanced how animal spirit physiology allowed the mind, particularly emotions, to profoundly influence the organs of generation in eighteenth-century medical thought. Other kinds of discourse that did not include eighteenth-century ideas of nerves, such as religious commentary, hardly figured at all in the discussions concerning the Mary Toft affair.⁴⁵

⁴⁰ As Wilson suggests, Turner’s claim as to how “the imagination could produce both mental and corporeal effects” “explicitly followed the expositions of Thomas Willis.” “‘Out of Sight,’” 73.

⁴¹ Turner, “Spots and Marks,” 232.

⁴² *Ibid.*, 233. For example, the royal surgeon Nicholas de Blégnny had made a case study of a 25 year old fetus found in a female’s abdomen and concluded that: “in Women the Matrix is made sensible of every strong and extraordinary Motion of the Mind.” Nicholas de Blégnny, *A True History of a Child Anatomized, which Remained Twenty Five Years in his Mothers Belly...* (London: printed by Tho. James for Samuel Lee, 1680), 25. Nicholas Malebranche also related a sensational case wherein a mother’s imagination was strongly affected by witnessing a convict being violently beaten. Nicholas Malebranche, *Father Malebranche His Treatise Concerning the Search After Truth...*, 2nd ed., trans. T. Taylor (London, 1700), 26. Like de Blégnny, Malebranche connected the womb with the brain in his conjectures: “the Passions and Sensations, and generally all the Thoughts occasion’d by the Body, are common to the Mother and the Child” (27).

⁴³ Turner, “Spots and Marks,” 231-32.

⁴⁴ *Ibid.*, 239.

⁴⁵ Jane Shaw, “Mary Toft, Religion and National Memory in Eighteenth-Century England,” *Journal for Eighteenth-Century Studies* 32, no. 3 (2009): 321-339.

Turner recounted at length the older medical descriptions of maternal impressions, which involved the “Motion of the Humours and Spirits.”⁴⁶ But, Turner’s own up-to-date account did not mention humours and relied solely on animal spirits, which conveyed the condition of “the sensitive Soul called *Fancy* or *Imagination*” as motions through the body and to the fetus. When the maternal imagination or fancy was affected by experience or memory the passions were aroused, the animal spirits excited, and an impression made on the fetus.

In Blondel’s critical response, he set out sixteen propositions that, if held to be true, refuted the existence of maternal impressions. These propositions affirm that “*Passions act upon the Body by accelerating, or diminishing the Velocity of the Blood, and Spirits.*”⁴⁷ According to Blondel, there was no physiological connection that allowed maternal animal spirits to affect the fetus. The mother’s immaterial imagination, therefore, could exert no physical power over the fetus:

*Can Imagination carry Knives into the Mother’s Belly, to make Dissolutions of Continuity in any Part of her Child’s Body, with which she has no nearer Affinity than when in the Nurse’s Arms? How can Imagination convey Pencils or other Tools, to delineate the Resemblance of Cherries, Strawberries, Plumcakes, and Gammons of Bacon? How can she draw out Bears, Frogs, Lizards? How sprinkle Claret on the Child’s Face, Neck or Breast? No, no, they are Cheats and Delusions, or mere Extravasation of the Blood; Moles, Wens or other accidental Risings in the Flesh.*⁴⁸

Turner, thereafter, revised the account: “I should rather define these kind of *Passions*, a tumultuous Disorder of the Spirits, or an irregular Dispense of the nervous Fluid influencing the Circulation, and disturbing the *Animal Machine.*”⁴⁹ Turner and Blondel, therefore, agreed on the physiological premise of maternal impressions—animal spirits excited by the imagination—but disagreed about whether animal spirits could move from the mother’s to the fetus’ body.⁵⁰

In “A Defence of the XIIth Chapter of the First Part of a Treatise *De Morbis Cutaneis*,” which was appended to his *Discourse Concerning Gleets*, Turner gave further examples to convince his readers of the phenomenon:

Thus for instance, if I see an unlucky Fellow throw a Frog into the Bosom of a pregnant Woman, who screams out upon the sight of it, and falls into a

⁴⁶ *Ibid.*, 242. To see this trend, see the historical examples in Todd, *Imagining Monsters*, 61.

⁴⁷ [James Augustus Blondel], *The Strength of Imagination in Pregnant Women Examin’d*, in *Eighteenth-Century British Midwifery*, ed. Pam Lieske (London: Pickering & Chatto, 2007 [orig. 1727]), 1: 1: 275.

⁴⁸ Turner quoting Blondel, “A Defence of the XIIth Chapter of the First Part of a Treatise *De Morbis Cutaneis*,” in *Discourse Concerning Gleets...* (London: John Clarke, 1729), 109.

⁴⁹ *Ibid.*, 84.

⁵⁰ *Ibid.*, 85.

Fit, from which after some time she is recover'd, yet has the Fits return between whiles: Some time after I see the Infant born of this Woman with a fleshy Portraiture of a Frog, growing out of its Breast; a Likeness not form'd by my Imagination.⁵¹

Turner insisted that this frog image was born not out of his imagination, but the mother's. Her fright, her dramatic scream and fit, were the outward enactments coinciding with internal impressions on the mind, animal spirits, and fetus. Another of Turner's examples involves a woman startled by a man with a stump-arm—her child was consequently born with a stump-arm.⁵² Central to each of Turner's reports is the shock to the mother's senses and the implication that her animal spirits and nerves were violently agitated.

Fetal markings were a particularly dramatic and permanent expression of the power of animal spirits. Other kinds of impressions, such as flushes, swoons, gesticulations, even lasting physiognomic features, did not as immediately or profoundly transfer what was in the mind onto the body. The special morphological processes of generation allowed greater opportunity for imprinting onto the fetal body. And, as noted in *Tristram Shandy*, a disturbance of the animal spirits had a big influence for something as small as an animalcule, or even an embryo.⁵³ Only a particular kind of pregnant woman received such powerful impressions in her mind and womb: those with fine senses and delicate nerves. Turner described how "some Women's *Passions* are stronger than others, and the *Ideas* they have once let into their Minds more durable or lasting; whilst others, better fortify'd by Presence thereof, or a more firm *System of Nerves*, have their *Fears* less shocking at the same formidable Object; also their *Desires* more transient, or less permanent."⁵⁴ Yet, there were instances that the shared nervous physiology allowed for a similar phenomenon in males. Pica too occurred primarily in pregnant women, but also occasionally happened in men. And, like maternal impressions, pica instanced how the mind was often involuntarily involved in disorders relating to generation.

Pica

John Maubray, a Scottish physician and man-midwife, published *The Female Physician* in 1724. He was particularly interested in pica,⁵⁵ cravings to eat usually non-foods

⁵¹ *Ibid.*, 73.

⁵² *Ibid.*, 73-4.

⁵³ As Wilson also observed, the "mother's wayward imagination also featured in the popular tales of Martinus Scriblerus, Peregrine Pickle, and Tristram Shandy." "Out of Sight," 83.

⁵⁴ Turner, "Defence of the XIIth Chapter," 93.

⁵⁵ Lazarus Riverius, *Riverius Reformatus: or the Modern Riverius; Containing the Modern Practice of Physick*, trans. François de la Calmette (London, 1706), 11. According to Riverius, "It is call'd *Pica* or *Pye*, from the Bird of that name; which is said to swallow little Balls of Earth."

or foods in remarkably large quantities,⁵⁶ which usually arose as a consequence of pregnancy. He suggested that “various *Humours*” caused the ill-effects of pica.⁵⁷ He cited several common beliefs about the malady: that it occurred from the fortieth day till the fourth month of pregnancy, that bad humours were either sent to the child or vomited, that the effect was more substantial in bearing a girl than a boy, and that the disease was more common in Holland.⁵⁸ Those understandings of physiology, pathology, and generation were rather antiquated, and Maubray did not stray far from traditional Galenic ideas of three bodily spirits and Aristotelian theories of male and female genitive seeds.⁵⁹ But what really thrust Maubray and his treatise into the lime light was his involvement in the Toft scandal. As Todd recounts, Maubray became entangled in the Mary Toft affair after “he attended her while she was in London.”⁶⁰ Observing how there were “but few ready to discuss the proper *Causes of Monstrous BIRTHS*,”⁶¹ Maubray stridently discussed unnatural and monstrous births, claiming that “the *Imagination* to have the most prevalent *Power* in CONCEPTION.”⁶² His writings about monstrous births and maternal impressions, including his account of personally delivering a sooterkin in Holland,⁶³ made him an easy target for satire as “the Sooterkin Doctor,” which Todd details excellently. Like his understanding of maternal impressions, Maubray’s thinking about pica was outdated. By the early eighteenth century, pica was explained in learned medical circles as wholly dependent on animal spirits operating between the organs of generation and the mind—an unusual phenomenon, but explainable according to physiology. That condition highlighted how the processes of generation could influence, and even overpower, the rational mind.

A contemporary of Maubray’s, the physician Charles Perry described how pica could also lead to “marking of the *fœtus in utero*—which often happens when their longings are not forthwith gratified.”⁶⁴ He theorized that in such a strong desire “the maternal blood and spirits will be determined and impelled, with the like force and impetus, upon the correspondent parts of the *fœtus in utero*,” leaving the impression.⁶⁵ Pica, however, was the reverse physiological sequence of maternal impressions: the gravid womb influenced animal

⁵⁶ Peter Shaw, *A New Practice of Physic* (London, 1726), 1: 179. “*Pica* or *malacia*, is an unnatural desire of feeding on such things as are accounted noxious, or unfit for nutrition.”

⁵⁷ John Maubray, *The Female Physician, Containing all the Diseases Incident to that Sex, in Virgins, Wives, and Widows* (London, 1724), 81.

⁵⁸ *Ibid.*, 82. Maubray also suggested that sooterkins, which were rodent-like creatures birthed from women, were particular to Holland.

⁵⁹ *Ibid.*, 13-22.

⁶⁰ Todd, “Three Characters in Hogarth’s *Cunicularii*,” 34.

⁶¹ Maubray, *Female Physician*, 367.

⁶² *Ibid.*, 368.

⁶³ *Ibid.*, 375.

⁶⁴ Charles Perry, *A Mechanical Account and Explication of the Hysteric Passion* (London, 1755), 283.

⁶⁵ *Ibid.*, 284.

spirits, which flowed to the brain, causing significant departures from a rational and healthy state of mind. Pica dramatically revealed the power of female sexual organs to exert influence over an individual's will. These uncontrollable and immediate appetites paralleled powerful sexual desires. In the eighteenth century pica became more associated with the organs of generation. For instance, unlike before and after the eighteenth century, pica was then most often aligned to "either chlorosis or pregnancy."⁶⁶ "Malacia" and "the longings of breeding women" were also generally synonymous to pica.⁶⁷ But, in the early eighteenth century pica became understood as a disorder of the animal spirits that afflicted certain types of breeding women: those with delicate nerves and constitutions and, by extension, those who embodied sensibility. Rather than a mere condition of the mind, eighteenth-century pica was affixed to a system of nerves operating between two centres of desire, the genital and the mental.

Pica had an obvious core set of symptoms, and for this reason the 1706 translation of Lazare Rivière's mid-seventeenth-century medical treatise glibly stated that "as for the *Diagnosis*, there is no need of any."⁶⁸ A woman who felt peckish for, or actually ingested, coals, cinders, chalk, lime, salt, clay, dirt, dust, iron, water, snow, ice, vinegar, verjuice, unripe fruits, leather, ashes, old shoes, wax, nut shells, mortar, slate pencils, oat meal, or tobacco-pipes signaled to the eighteenth-century observer that she was either exceedingly hungry or suffering pica.⁶⁹ But, pica's symptoms were more complex than unusual cravings. It also involved "Weakness of *Body*, Dissolution of *Limbs*, Gnawing of *Stomach*, Loathing of *Wholesome Food*, (and even *That* very often which the *Party* lov'd before) *Anxiety*, *Pensiveness*, frequent *Spittings*, and (at several times) *Vomitings*."⁷⁰ Just as loathing once-

⁶⁶ B. Parry-Jones and W. LL. Parry-Jones, "Pica: Symptom or Eating Disorder? A Historical Assessment," *British Journal of Psychiatry* 160 (1992), 344. According to Helen King, chlorosis and pregnancy shared pica as an important symptom. Helen King, *The Disease of Virgins: Green Sickness, Chlorosis and the Problems of Puberty* (London: Routledge, 2004), 10.

⁶⁷ Although some authors distinguished malacia as being specific to those who were pregnant. See Perry, *Mechanical Account and Explication*, 278; Parry-Jones and Parry-Jones, "Pica," 344. However, other disorders correlated with pica before, during, or after the eighteenth century, such as chlorosis, amenorrhoea, iron deficiency, anorexia nervosa, and others, are not the focus here. For those discussions, see Parry-Jones and Parry-Jones, "Pica," 350. I. S. L. Loudon, has divided the eighteenth century according to perceptions of chlorosis: "Before 1750, [chlorosis] was described as the 'disease of virgins' or the 'febris amatoria,' a disorder due to 'unrequited love,'" and the from "roughly 1750 to 1850, it was generally believed to be a uterine disorder or a disorder of menstruation characterized by amenorrhoea." I. S. L. Loudon, "Chlorosis, Anaemia, and Anorexia Nervosa," *British Medical Journal* 281 (1980), 1669.

⁶⁸ Riverius, *Riverius Reformatus*, 13.

⁶⁹ See Maubray, *Female Physician*, 83; Riverius, *Riverius Reformatus*, 11, which list these common objects of pica cravings. For this objects desired or ingested due to pica, also see King, *Disease of Virgins*, 104.

⁷⁰ Maubray, *Female Physician*, 82.

loved foods was particular to the individual, so too was longing. Maubray described how women affected by pica or “longing” are “desirous of *Meat* and *Drink*; yet commonly of *such*, as is not only *disagreeable*, but also *offensive* and *prejudicial* to NATURE.”⁷¹ Likewise, Perry related how some pregnant women drank “several quarts, or even gallons” of wine or stronger liquors without being inebriated and how other typically weak-stomached women ingested “several pounds” of meat “with perfect impunity.”⁷² Not only did pica reinforce the connection often made between digestion and generation, it revealed how the gestational state could enable women to exceed their *natural* habits, dispositions, and abilities.

Aside from its typical symptoms and the results of eating irregular things or inordinate amounts, pica had potentially severe and even fatal consequences for the ill woman and her fetus. As Maubray elaborated, a woman whose pica cravings went unsatisfied “*languishes* and *pines* to such a degree, that her *life* is often endanger’d, together with the FOETUS, by the Disappointment.”⁷³ Highlighting the threat to the unborn child, Perry wrote of “the numbers of women who have suffered abortion, from a disappointment, or even a delay, in the seasonable gratification of it.”⁷⁴ The possibility of abortion had even greater currency within medical understandings of nerves and spirits. As feelings and impressions were considered important in the culture of sensibility, desires were taken seriously and supposed to have tangible and profound effects.

Medical authors theorized that the drastic effects of unrealized pica desires resulted from a devastating shock to the nerves. Unlike Maubray’s midwifery text, specialized treatises on nervous and reproductive pathologies emphasized the role of animal spirits. This emphasis is apparent in Perry’s outline of pica:

This symptom, as it happens to breeding women, (because preternatural and very perverse appetites sometimes happen to virgins, under cachectical and chlorotic habits) must necessarily proceed either (1) From a vitiated ferment in the stomach—or (2) from a depravation and perversion of its natural and proper *menstruum*—or (3) the like passion, perception, or appetite, may be excited by irregular capricious actions and operations of the animal spirits, in and upon the stomach—or lastly, this passion may perhaps be fabricated in the brain.⁷⁵

⁷¹ *Ibid.*, 81.

⁷² Perry, *Mechanical Account and Explication*, 281-2.

⁷³ Maubray, *Female Physician*, 83.

⁷⁴ Perry, *Mechanical Account and Explication*, 281. See Parry-Jones and Parry-Jones, who have described how “belief in the dangers of thwarting the cravings of pica is a recurrent theme.” “Pica,” 345.

⁷⁵ Perry, *Mechanical Account and Explication*, 278.

In Perry's estimation of pica, like those of other mid-eighteenth-century physicians and surgeons, "the animal spirits may be both the cause and the instrument of it."⁷⁶

Rivière, a physician to Louis XIII and professor of medicine at Montpellier, gave similar explanations of pica, suggesting it could arise "from the retention of the *Menstrua*, which occasions this Distemper"⁷⁷ or from "the imagination, phansie, and prejudices."⁷⁸ Perry also linked the retention of menses to "swoonings or fainting." He described how a "retrograde motion of the animal spirits upon the brain" occurred either from withheld menses or from "the mind itself." Such problems, like pica, most often happened to pregnant women because of

sudden struggles, leaps, or other extraordinary motions of the *fœtus in utero*. However they may, doubtless, sometimes proceed from irregular motions, agitations and perturbations of the animal spirits.—For it is very notorious, that irregular motions, and inordinate fluxions of the animal spirits, may cause a *deliquium animi* or swooning, even in any person;—but more especially in breeding women.⁷⁹

The movements of fetuses and animal spirits similarly had the capacity to disrupt the female body and mind.

There was an extensive range of how pica could alter the workings of the mind. For instance, pica was strongly associated with melancholy. As Rivière observed, both disorders could originate from a problem in the mind or womb,⁸⁰ and both reflected conditions of the animal spirits. Pica could thus result from either mental or sexual disorders. William Perfect, a surgeon, apothecary, man-midwife, physician, "mad-doctor," and notable freemason in West-Malling,⁸¹ offered a six-page list of symptoms of nervous disorders including "a strong desire for rare or uncommon sorts of food, or for things that can afford no nourishment; a visible swelling or inflation of the stomach, especially after eating."⁸² Indeed, one of his case studies of a young female detailed how "her anxiety at times was inexpressibly great, her appetite so much depraved, that she would eat paper, cinders, bits of wall, or any thing that lay in her way, and sometimes so unnaturally voracious, that she would swallow her food in too large a quantity, without chewing."⁸³ This affliction emanating from the womb could

⁷⁶ Ibid., 279.

⁷⁷ Riverius, *Riverius Reformatus*, 12.

⁷⁸ Ibid.

⁷⁹ Perry, *Mechanical Account and Explication*, 275.

⁸⁰ Riverius, *Riverius Reformatus*, 12.

⁸¹ See Shirley Burgoyne Black, *An 18th Century Mad-Doctor: William Perfect of West Malling* (Oxford: Darenth Valley Publications, 1995).

⁸² William Perfect, *Cases of Insanity, the Epilepsy, Hypochondriacal Affection, Hysteric Passion, and Nervous Disorders, Successfully Treated*, 2nd ed. (London, 1785), 102

⁸³ Ibid., 203-4.

lead to excessive actions that were seen as diametrically opposed to reason. Because the animal spirits were affected in pica, the mind lost its control.

There was a possibility that others beside pregnant women could experience pica, since the condition ultimately arose from a specific kind of disruption in the animal spirits and nerves. Peter Shaw, a nerve disorder specialist and physician to both George II and George III,⁸⁴ related pica to melancholic disorders. When he wrote that pica was “sometimes the effect of a delirious hypochondriacal affection in men; a chlorosis, stoppage of the *menses*, or their eruption, about the second or third month of pregnancy in women; or else it may be hereditary in children, from some cause affecting or residing in the mother.”⁸⁵ Notably, Shaw widened the scope of the kinds of people pica could affect, by including men and children. Rivière had made a similar observation, “*Pica* and *Malacia* is a Distemper commonly incident to Maids and Women; I say commonly, because Boys and Men have sometimes been troubled with the same.”⁸⁶ Children received pica as a hereditary disorder: “these Phansies and Prejudices are either Hereditary and transmitted from the Mother to the Child.” But, pica could also occur by the power of suggestion. Rivière described how pica was “induced by others.” He detailed how it “often it happens in Maids, that create one another an Appetite to certain things by perswading them, that by taking such things they formerly have made themselves look fair and handsome.”⁸⁷ This susceptibility among maids reinforced the common association of pica with chlorosis.⁸⁸ While most descriptions of pica highlight pregnant women with sensible constitutions to be of most concern, some descriptions emphasize various other kinds of sufferers, including maids, boys, and men.

Medical practitioners treating pica offered a similar, although less varied, blend of medication, lifestyle, and sexual behaviour to that used in treating venereal disease. For maids, the best cure for pica was marriage. In *The Spectator* of 1712 there is a letter from one Sabina Green, a sufferer of chlorosis and pica.⁸⁹ Her case was cured upon being happily wed. In prescribing medication, “antihysterics, cephalics, and chalybeats” were regularly used.⁹⁰ Maubray thought that, “as soon as they *conceive*,” women should prophylactically take “*Anti-kittean Medicines* (that is, against PICA or *Longing*) and be very careful of their

⁸⁴ See Jan Golinski, “Shaw, Peter (1694–1763),” *Oxford Dictionary of National Biography*, Oxford University Press (2004); Allan Ingram, ed., “Peter Shaw (1694-1763), *The Juice of the Grape; or, Wine Preferable to Water* (1724),” in *Patterns of Madness in the Eighteenth Century: A Reader* (Liverpool: Liverpool University Press, 1998), 69-73.

⁸⁵ Shaw, *New Practice of Physic* (London, 1726), 1: 179.

⁸⁶ Riverius, *Riverius Reformatus*, 11.

⁸⁷ *Ibid.*, 12.

⁸⁸ *Ibid.*

⁸⁹ Parry-Jones and Parry-Jones, “Pica,” 344.

⁹⁰ Perry, *Mechanical Account and Explication*, 275.

*Regimen and Diet.*⁹¹ However, like treating venereal disease, these eighteenth-century remedies were recognized as having limited efficacy. Christopher Anstey, a poet known for his *The New Bath Guide*, depicted how a pica-suffering maid, Tabby Runt, developed the malady as a side-effect of certain medications:

He gives little Tabby a great many Doses,
For he says the poor Creature has got the Chlorosis,
Or a ravenous Pica, so brought on the Vapours
By swallowing Stuff she has read in the Papers;⁹²

Pica, for the pregnant or non-pregnant, was a distinctly nervous malady brought about by the animal spirits being disturbed and agitated from within the body. But, just as pica could be incited by external influences on the mind, so too could it be cured by suggestion or persuasion. For this reason, “the Physician must make use of all his Skill to destroy those Imaginations.”⁹³ This proto-psychology represents an unusual break from the typical fixation on bodies rather than minds in eighteenth-century medical treatments of these nervous and sexual disorders. Yet, that therapeutic approach illustrates the acute awareness of practitioners about mental and nervous impressions. As George Rousseau shows in his detailed analysis of pica in Tobias Smollett’s *The Adventures of Peregrine Pickle*, eighteenth-century medical and literary depictions of that malady implicated a sensible physiology.⁹⁴

Febricula

Another, more prominent, figure in the Mary Toft affair was Richard Manningham, physician to George I and one of most renowned and fashionable Augustan man-midwives. Unlike Maubray, Manningham generally disbelieved Toft’s claims, as his diary published shortly after the affair reveals. Nonetheless, even Manningham entertained the possibility of Toft’s mind producing unnatural births, as he affirmed the same physiological principles as Turner and Blondel did—that animal spirits flowed between womb and brain with powerful influences on gestation and thought. This physiology and medical perspective on pregnant women, is evident in a treatise Manningham published two decades after Toft’s hoax was exposed, *The Symptoms, Nature, Causes, and Cure of the Febricula, or Little Fever: Commonly Called the Nervous or Hysteric Fever; the Fever on the Spirits, Vapours, Hypo, or Spleen*, which went to five editions between 1746 and 1755.⁹⁵ As the title suggests, his

⁹¹ Maubray, *Female Physician*, 84.

⁹² P. S. Brown, “The Venders of Medicines Advertised in Eighteenth-Century Bath Newspapers,” *Medical History* 19, no. 4 (1975) 365. Brown notes that these cures that Tabby uses are those prepared by John Hill.

⁹³ Riverius, *Riverius Reformatus*, 14.

⁹⁴ Rousseau, *Enlightenment Borders*, 194.

⁹⁵ For more details on Manningham’s treatise, see Ward, ““Cruel Disorder,”” 95-106.

treatise set out a new nosology, wherein diseases previously understood or described separately were grouped together as “febricula.” Manningham intentionally based this new disease category upon new physiological theories. He confessed “employing the many useful and *late* Discoveries, unknown to the Antients in *Anatomy* and the *Animal Oeconomy*.”⁹⁶ Febricula was, according to Manningham, “every where to be met with.”⁹⁷ Yet, this new diagnosis did not catch on; practitioners continued to write about maladies as hysteric, nervous, vapours, hypo, or spleen, but not febricula. The disease only existed in name and description during a three-decade span. However, this short-lived pathology instances how fashionable medicine in the mid-eighteenth century portrayed animal spirits in pregnant females with delicate constitutions as the source of mental and physical sensitivities, behaviours, and problems. In describing this new malady, Manningham emphasized ideas about a mutual and disruptive relationship between the female organs of generation and the mind, especially in those women with nervous, sensible qualities.

Febricula does not have much of a legacy in current-day scholarship, aside from a few recent, ill-found claims that Manningham’s diagnosis is the original description of chronic fatigue syndrome.⁹⁸ The symptoms and etiology that Manningham described reflect similar ideas and concerns central to discussions about pica and maternal impressions during that period. Manningham was concerned especially about the sensitive and delicate qualities of animal spirits in pregnant women, and the disastrous effects that disruptions to those spirits could have for both mother and child. The only other study of febricula comes from Candace Ward, who insightfully compared fever treatises, specifically Manningham’s book on febricula, and mid-century sentimental novels to show “how the two genres functioned together to construct and interpret the sensible body during this period.”⁹⁹ That sensible body, which Ward recognized in Manningham’s treatise, was inseparable from that

⁹⁶ Richard Manningham, *The Symptoms, Nature, Causes, and Cure of the Febricula, or Little Fever: Commonly Called the Nervous or Hysteric Fever; the Fever on the Spirits, Vapours, Hypo, or Spleen* (London, 1746), 65.

⁹⁷ *Ibid.*, 15.

⁹⁸ Such a retrospective comparison not only ignores significant cultural and historical differences in medicine but falls far short of convincing, yet has been often repeated in medical journals since 1991: see Stephen E. Straus, “History of Chronic Fatigue Syndrome,” *Clinical Infectious Diseases* 13 (1991): 2-7; Mark A. Demitrack and John F. Greden, “Chronic Fatigue Syndrome: The Need for an Integrative Approach,” *Biological Psychiatry* 30 (1991): 747-52; Gunther Neeck and Leslie J. Crofford, “Neuroendocrine Perturbations in Fibromyalgia and Chronic Fatigue Syndrome,” *Rheumatic Disease Clinics of North America* 26 (2000): 989-1002. Examining Manningham’s diagnostics reveals a negligible amount of diagnostic descriptions shared with those used today for chronic fatigue syndrome. It was a different disease, which reflected a vastly different milieu. See King, *Disease of Virgins*, 1, which discusses how there are not one-to-one equivalents with diseases now and those of the past.

⁹⁹ Ward, “Cruel Disorder,” 97.

understanding of animal spirits that medics and literati referred to in depicting fluid, sensitive, fickle, yet predictable and readable body/mind relationships.

Manningham's preface introduces the reader to febricula's symptoms, which are characteristic of nervous disorders generally. Patients initially

*feel themselves languid and uneasy, without any Marks of an evident Disease; they have a Weariness and Flying Pains about them, a Dryness of the Lips and Tongue, but little Thirst; rather a Dislike, than a Desire of much Drink; they often in a Day are giddy, make pale Urine, and are greatly dispirited, and anxious, without being able to assign any Reason for it: They have transient Chillinesses often, and the Pulse is low, quick, and unequal: They have sometimes cold, clammy Sweats, Rising in the Throat, and the like. And on every the least sudden Surprize, Grief, Anger, and the like Commotions, this little Fever subsisting, those, and the like Symptoms, are always increased.*¹⁰⁰

Rampant desires, unsettled emotions, and fickle appetites indicated febricula, and classed it with other disorders of animal spirits. As Manningham mentions, the pulse was key for diagnosis. He further elaborated how "this Kind of Pulse is the *characteristic Mark* of the *Febricula*, which proceeds from a *vitiated and impoverished State* of the *Blood*, with a *Diminution* of its *Quantity*, not affording a *due Secretion* of the *animal Spirits* in the *Brain*, and a proper *Conveyance* from thence to the other *Parts* of the *System*."¹⁰¹ His understanding of febricula as a reproductive disorder affecting the entire body and mind set out that it followed distinctly "*from a Fault in the Blood, and Animal Spirits*"¹⁰²—those two key fluids that repeatedly defined eighteenth-century mental and reproductive pathologies.

Although he offered some secondary causes of febricula such as "an *impeded Perspiration*,"¹⁰³ the malady was primarily a consequence of the economy of animal spirits. For this reason, he sought an answer to "how we may prevent any *profuse Expende* of *Spirits*."¹⁰⁴ Another etiology of the disease that related to the idea of fluid economy, as used by pathological descriptions of pica and maternal imagination, was amenorrhoea: "Every *Woman, almost, has Monthly Discharges*, which continue to return *orderly*, while she continues in *Health*; but, when seized with this *Febricula*, these *Evacuations* cease; and then this *Stoppage* is too often assigned as the *Cause* of her *Disorder*."¹⁰⁵ This mistaken attention

¹⁰⁰ Manningham, *Febricula, or Little Fever*, preface, vii-viii.

¹⁰¹ *Ibid.*, 47.

¹⁰² *Ibid.*, preface, ix.

¹⁰³ *Ibid.*, 15. Manningham also stated that the seat of the disease is in the blood and animal spirits (47).

¹⁰⁴ *Ibid.*, 51.

¹⁰⁵ *Ibid.*, 92.

to an older humoral model and blood levels rather than animal spirits prompted Manningham to warn that bleeding treatments were “*exceedingly dangerous*; because of the present great *Defect of Animal Spirits*, the *universal Flaccidity* of all the Fibres of the Body, and that there is no *abounding* in the Quantity of Blood.”¹⁰⁶ Animal spirits were at the core of febricula, meaning sensations and thoughts were also implicated. As shown in hypochondria and pica, the imagination could become distorted and cause those affected to “*falsly* imagine themselves breeding.”¹⁰⁷ Some afflicted with febricula were susceptible to miscarriages and “more *lingering* and *painful* Labours.”¹⁰⁸ Additional problems arising “*from the Neglect of this little Fever, during Pregnancy*,” included “many Miscarriages, difficult *Labours*, and surprising *Accidents, soon after Delivery*.”¹⁰⁹ However, the worst consequences were those typical of nervous and generation disorders, namely “*Stupors, and Death*.”¹¹⁰

In line with nervous and sexual pathologies corresponding to the culture of sensibility, those affected by febricula were of a delicate constitution and from the genteel social class. Accordingly, certain privileged behaviours brought on the disorder, “such as *Grief, great Sollicitude, Watchings, intense Thought and Study*.”¹¹¹ These “*antecedent Causes*” were characteristic of women with leisure time and education, and who could afford indulging private moods and solitary activities. Febricula also involved dramatic symptoms, such as swooning, that indicated both delicacy and illness.¹¹² Manningham owned these exclusive demographics of febricula by admitting that “*the chief of my Practice, indeed, has been among the Female Sex, who are generally of more tender and delicate Constitutions; and therefore such as are always most liable to this Sort of Fever*.”¹¹³ He attended and wrote in regard to fashionable women, who assumed the modes, ideas, and behaviours of sensibility. These “*tender Women*”¹¹⁴ were more “*subject to the Febricula; especially weakly, sedentary, and studious Persons*.”¹¹⁵ Other factors contributed to receiving the disease, such as the weather, diets, lifestyles, and urban environment, all of which affirmed that malady to be particular to the well-bred, urbane English women.¹¹⁶

Curing a febricula was most contingent upon correcting imbalances and disturbances in the blood and animal spirits. He also cautioned women against “quitting their

¹⁰⁶ Ibid., 94.

¹⁰⁷ Ibid., 94.

¹⁰⁸ Ibid., 96.

¹⁰⁹ Ibid., preface, vi.

¹¹⁰ Ibid., preface, vii-viii.

¹¹¹ Ibid., 49-50.

¹¹² Ibid., 72.

¹¹³ Ibid., preface, vi.

¹¹⁴ Ibid.

¹¹⁵ Ibid. Similar to the causes for pica described in Rivière, *Riverius Reformatus*, 13.

¹¹⁶ Manningham, *Febricula, or Little Fever*, preface, vi-v.

Beds too early;”¹¹⁷ but such long lying-ins probably reinforced their status and his employment more than it guarded against febricula. Rather, “the best *general* Method of curing *acute* Fevers,” according to Manningham, was “lessening the Quantity, and correcting the *Quality* of the Blood.”¹¹⁸ Towards this end, he recommended to not bleed delirious pregnant women, but to give “*emollient Glysters*,” which “not only brings on a *proper Flow* of the *Lochia*, but happily carries off this *Delirium*.”¹¹⁹ Aside from those treatments, “giving a little *Rhubarb*” was supposed to help too.¹²⁰ Whereas these treatments affirm the idea that Manningham’s febricula applied to well-to-do women, his ideas about animal spirits significantly affecting the health of pregnant women surely extended to a larger group of patients as “in the summer of 1739 he rented and opened a house, or part of a house, in Jermyn Street, next to his own residence, for the reception and treatment of twenty-five lying-in women.”¹²¹ As one of the most influential man-midwives in mid-eighteenth-century Britain, Manningham carried clout, and his notions about animal spirits as crucial to reproductive and mental pathologies permeated well beyond the modish mothers-to-be he personally attended. For women in the mid-eighteenth century, pregnancy was an especially vulnerable time, as a gravid womb could readily disturb the animal spirits and entirely alter one’s state of mind. These female pathologies based on the animal spirits—febricula, pica, and maternal impressions—associated certain fashionable behaviours and mental activities with a susceptibility to the loss of control and reason.

Gonorrhoea

“There is scarce any man arrived at a certain time of life, who has not felt some fatal consequence of the Venereal Infection.”¹²² So wrote Jacques Daran, the Surgeon in Ordinary to the King Louis XV, Surgeon-Major to the hospitals and armies of the emperor Charles VI, and all-round authority on venereal disease in the mid-eighteenth century. In London, the equally opportunist, but much less successful or respected, Marten observed that “so universally is the Distemper now become, that it is almost as much a wonder to hear of many Persons that never had it, or that never had taken the way to get it, as it was formerly a wonder to hear of any infected.”¹²³ As early as the 1550s St. Bartholomew’s and St.

¹¹⁷ *Ibid.*, 47.

¹¹⁸ *Ibid.*, 32.

¹¹⁹ *Ibid.*, 100.

¹²⁰ *Ibid.*, 108.

¹²¹ G. C. Peachey, “Note upon the Provision for Lying-in Women in London up to the Middle of the Eighteenth Century,” *Proceedings of the Royal Society of Medicine* 17 (1924), 74.

¹²² Jacques Daran, *A Complete Treatise on the Virulent Gonorrhoea. Both in Men and Women* (London, 1767), preface, xi.

¹²³ The same sentiment, although from a medical opportunist rather than medical authority, was voiced by John Marten, *A Treatise of all the Degrees and Symptoms of the Venereal Disease, In Both Sexes* (London, 1708), 2. Marten also commented: “it is undeniable that the

Thomas's hospitals began treating the infected poor;¹²⁴ by the mid-eighteenth century London's Royal Hospitals treated "hundreds of patients a year" for venereal disease.¹²⁵ This rampant sexual disease, as Daran commented, had certain fatal consequences, which were particular to eighteenth-century medicine. Those consequences frequently related to how venereal disease affected the nerves and, consequently, the mind and constitution. As this chapter has already shown, sexual and reproductive pathology and animal spirit physiology became closely connected during the mid-century.¹²⁶ This section is an extended examination of the most widespread, socially concerning, and culture-changing sexual malady of the period, venereal disease.¹²⁷ However, the focus here is on one aspect of that disease or, more specifically, one phase of it. From the mid-sixteenth until the late eighteenth century,¹²⁸ most people understood the initial stage of the venereal disease to be gonorrhoea,¹²⁹ which sometimes progressed into a syphilitic stage.¹³⁰ Gonorrhoea could also

Pox in this loose and dissolute Age, is more propagated in one Day, than an hundred Years ago it was in a Month."

¹²⁴ Kevin Siena, "The Clean and the Foul: Paupers and the Pox in London Hospitals, c. 1550-1700" in *Sins of the Flesh: Responding to Sexual Disease in Early Modern Europe*, ed. Kevin Siena, 261-84 (Toronto: Centre for Reformation and Renaissance Studies, 2005), 263.

¹²⁵ Linda E. Merians, "The London Lock Hospital and the Lock Asylum for Women," in *Secret Malady*, 128-145. The London Lock Hospital opened on 31 January 1747.

¹²⁶ Thomas Broman, "The Medical Sciences," in *The Cambridge History of Science: "Eighteenth-Century Science,"* ed. Roy Porter (Cambridge: Cambridge University Press, 2003), 4: 468. Broman notes a "growing theoretical separation between the core subjects of physiology and pathology" over the century.

¹²⁷ The conflation of gonorrhoea and syphilis incited persistent speculation, debate, and confusion. As Quézel explained, this conflation as the "unicist" theory, which held "that a single venereal 'virus' or poison is responsible for a variety of different symptoms." Quézel, *History of Syphilis*, 5. Venereal disease was also a complex of symptoms. At the beginning of the eighteenth century, Herman Boerhaave described the venereal disease as a "Proteus of a Disease." Herman Boerhaave, *A Treatise on the Venereal Disease, and Its Cure in all Its Stages and Circumstances*, trans. J. B. M. B. (London, 1729), 8. Quézel also described it as a protean disease. *History of Syphilis*, 77.

¹²⁸ Jesse Foot, *Observations upon the New Opinions of John Hunter in His Late Treatise on the Venereal Disease* (London, 1786), 1: 9. Foot traced the first author on Venereal disease as Nicolaus Leonicensus of Vicentia from 1497. Among the 33 authors following Leonicensus, none of them, according to Foot, mention "a word about a gonorrhœa, or any other disease of the Urethra."

¹²⁹ Gonorrhoea could be synonymous with clap, running of the reins, and lues venerea.

¹³⁰ That stage of venereal disease was synonymous with the pox and the French disease. Quézel in *History of Syphilis* described how gonorrhoea was "simply one of the manifestations of syphilis, just like a chancre" (82). See also the introduction to Merians, *Secret Malady*, which describes how "European countries had been in the clutches of a syphilis epidemic since 1495, and despite the fact that historical, religious, and literary texts document gonorrhœa in Europe before that year, it was mistakenly linked to syphilis when the epidemic overtook the Continent" (5). This kind of short history is also given in Siena, "Introduction," in *Sins of the Flesh*, 12-13. Siena discusses the origins of syphilis, and the related historiography (8-9). For how venereal disease progressed into a syphilitic phase, see Andrew Duncan, *Medical Cases, Selected from the Records of the Public Dispensary at Edinburgh...*, 2nd ed. (Edinburgh: C. Elliot, 1781), 210. Ironically, the most credited theory

be unconnected with venereal disease, in which case it was often qualified as “simple” or “non-virulent.” Regardless of its type, the etymology of gonorrhoea remained “an involuntary Flux of Seed.”¹³¹ This incontrollable loss of seed caused disastrous deficits in animal spirits that could debilitate the mind and fatally injure the body.

Eighteenth-century understandings of gonorrhoea blended a Hippocratic principle—fluid imbalance—with an emphasis on nerves and animal spirits.¹³² Gonorrhoea’s central features were fluctuations in genital sensations and involuntary emissions, particularly the weeping of fluid from genitalia known as a gleet. That the flux of spirits disrupted the entire fluid economy of the nerves was evident in the symptoms commonly attributed to gonorrhoea: painful urinating,¹³³ titillating feelings,¹³⁴ priapism, painful erections,¹³⁵ semen and pus emissions, pain in the testicles,¹³⁶ low spirits, general weakness, consumption, and hypochondria or hysteria.¹³⁷ The Warwickshire surgeon James Cooke suggested that

in the eighteenth century concerning the origin of venereal disease—that scourge of so many personal fortunes—was that it arrived in Europe as a consequence of the Columbian exchange at the close of the fifteenth century. James Cooke gave an often repeated history on lues venerea: “Commonly call’d the *French-Pox*. It entred *Europe* about the year 1493 at the Siege of *Naples*, brought thither (as is said) by the followers of *Christoph. Columbus*, from the *West-Indies*, and by them communicated to the *Italian-Women*, and from them to the *French* by Coition; so that this is the product of that sin, for which God hath pronounced ... ’Tis a Virulent and Contagious Cachexy of the whole Body.” James Cooke, *Mellificium Chirurgia: or, the Marrow of Chirurgery* (London, 1717), 226. Falck also suggested that Columbus’ voyages brought the pox to Europe. *Venereal Disease*, 72. Peter Lewis Allen describes how syphilis became a “venereal” disease in early sixteenth century. Peter Lewis Allen, *The Wages of Sin: Sex and Disease, Past and Present* (Chicago: University of Chicago Press, 2000), 45.

¹³¹ Thomas Garlick, *A Mechanical Account of the Cause and Cure of a Virulent Gonorrhœa in Both Sexes...* (London, 1727), 1. Philip Woodman gave the following description: “a *Gonorrhœa* or *Running of the Reins* is the involuntary Emission of a Semen-like Humour from the *Yard*.” Philip Woodman, *Medicus Novissimus; or, the Modern Physician...* (London: printed by J. H. for Chr. Coningsby, 1712), 296. In describing the etymology of “gonorrhœa,” George Warren suggested the Greek origin is a compound of “semen” and “fluere,” which “signifies no more than an Involuntary Emission of Seed.” George Warren, *A New Method of Curing, Without Internal Medicines, that Degree of the Venereal Disease, Call’d, a Gonorrhœa or Clap*, 2nd ed. (London, 1711), 1.

¹³² Allen, *Wages of Sin*, 3.

¹³³ Also known as *chaude-pisse* and *ardor urinæ*.

¹³⁴ See Smyth, *New Treatise*, 14. Smyth described how a gonorrhoea causes “a titillation is felt in the part...the erection becomes involuntary and frequent, especially when in bed.”

¹³⁵ Called a *chordee*.

¹³⁶ Warren, *New Method of Curing*, 54.

¹³⁷ Aside from the common symptoms of venereal disease, Joseph Cam described others, such as: “Defluxions on the Throat, Coughs, Night-Sweats, Lassitudes, Pains of the Back, Leanness, Consumptions, Fissures any where, Falling off of the Nails, Crustiness on the Skin, *Polypus*’s, Piles, a cancerous Thrush, Tettors on the Privities, Melancholies, Madnesses; the *Alopecia* or Falling off of the Hair, *Ficus*, *Condylomata*, *Mariscæ* on the *Anus* and its Verge; nay, we have seen some Hypochondriacal, others Phrenetick; we have often observ’d *Hecticks*, *Vertigo*’s, Dropsies, Deafness, Blindness, Palsies, *Epilepsies*, all sorts of Breakings out, *Dysenteries*, Fluxes, *Diabetes*; and in short, there is hardly any

gonorrhoea was sometimes “more pernicious to the Mind than Body.”¹³⁸ By this Cooke meant that non-virulent gonorrhoea, or so-called gleans, often both derived from the mind and most affected the mind. His remedy for these non-virulent gonorrhoeas was changes in behaviour and lifestyle, with marriage his foremost recommendation, as was commonly prescribed. For gonorrhoea generally, the most complicated and feared sequelae were mental problems that caused unreason: hypochondria, hysteria, and melancholy. The pathology of gonorrhoea threw volition and reason into relief because that disease was both the consequence of unreason—sexual desires overrode the rational faculties leading to imprudent behaviour—and the cause of unreason through its draining of animal spirits and mental effects.

Just as animal spirits worked more finely in individuals with sensibility so gonorrhoea threatened worse consequences for those with sensible qualities. Because of this association with sensibility and nerves, gonorrhoea was “the *a-la-mode* Distemper,”¹³⁹ one which fit especially with the persona of urbane young men of means, fine grooming, and libertine attitudes. Narratives about venereal disease, whether literary or medical, were distinctly concerned with personal ruin, in health, reputation, and finance of these male types. This medical concern is also described by Elizabeth Stephens in relation to nineteenth-century spermatorrhea. She argues that “spermatorrhea represents a unique episode in the history of medicine and the male body in which the fear of leakiness and fluidity historically displaced onto the female body comes to be directed at a pathologized white, male, middle-class, and heterosexual body that has traditionally shaped norms about sexuality and corporeality.”¹⁴⁰ The episode Stephens describes was certainly not unique to the nineteenth century. Concerns about males losing semen “as an incontinent, seeping leakage” and suffering numerous subsequent health effects, which Stephens describes,¹⁴¹ emerged as part of the robust nervous/sexual fluid discussions of the late seventeenth and early eighteenth centuries. As Lisa Wynne Smith describes, there was a “growing pathologisation of specific leaks (haemorrhoidal, urinal and seminal) in men” in the

Distemper which this malignant and acrimonious Humour does not bring on.” Joseph Cam, *A Rational and Useful Account of the Venereal Disease*, 8th ed. (London, 1740), 21. Cam also adhered to the unicist perspective; “It would be vain to split this Disease into so many trifling Divisions...” he actually groups many diseases, such as gonorrhoea and syphilis, together. However, like most medial authors, he discussed gonorrhoea as a distinct disorder, which presented many serious, even fatal, complications of its own (32).

¹³⁸ Cooke, *Mellificium Chirurgiae*, 233.

¹³⁹ Perry, *Mechanical Account and Explication*, 264.

¹⁴⁰ Elizabeth Stephens, “Pathologizing Leaky Male Bodies: Spermatorrhea in Nineteenth-Century British Medicine and Popular Anatomical Museums,” *Journal of the History of Sexuality* 17, no. 3 (2008), 422.

¹⁴¹ *Ibid.*, 425.

eighteenth century.¹⁴² Discourse about these leaks, as Smith suggests, were “shaped by age, class and culture, emphasised the importance of men’s bodily control.”¹⁴³ Yet, contrary to Smith’s perspective, males were not always able to “regulate their flowing bodies,” although their inability to do so did indicate “an inability to govern one’s health and manhood.”¹⁴⁴

Medical ideas about how promiscuousness and sexual disease led to a loss of animal spirits, which critically impaired the body and mind, reflected wider social, political, and cultural concerns. Often to pique their readers’ anxieties, medical authors also cited concerns about the well-being of future generations and the national population.¹⁴⁵ Even King James II’s ability to produce a viable heir was a source of public concern and ridicule because “his blood was corrupted and his seed so bad by the pox.”¹⁴⁶ Anxieties relating to venereal disease were foremost about the instability it threatened—to the individuals, families, and the body politic. One of the main targets for curbing the spread of venereal disease was the entertainments associated with sexual liberality. Moral outcries about licentious activities and, especially, lewd books as inspiring salaciousness and spreading venereal disease abounded. Eighteenth-century advice writings on gonorrhoea typically promoted marriage and condemned promiscuity, but especially concerning the moneyed classes. Mercenary attitudes and commercial interests in medical literature on venereal disease also accounted for this focus on wealthy, potential customer-patients.¹⁴⁷ Yet, print culture occupied a complicated position.

Several medical texts were simultaneously moralizing and lewd, simultaneously advocating the healthy maintenance of animal spirits and self-control while also inciting the readers’ senses and sexual desires. Further, medical literature increasingly acknowledged that sexual contact was not the sole mode of transmission. Babies were also born with the disease, and wet-nurses and nursing infants infected each other.¹⁴⁸ Several stories also

¹⁴² Lisa Wynne Smith, “The Body Embarrassed? Rethinking the Leaky Male Body in Eighteenth-Century England and France,” *Gender & History* 23, no. 1 (2010): 26.

¹⁴³ *Ibid.*

¹⁴⁴ *Ibid.*

¹⁴⁵ Kathryn Norberg, “From Courtesan to Prostitute: Mercenary Sex and Venereal Disease, 1730-1820,” in *Secret Malady*, 40-1.

¹⁴⁶ Dudley Ryder, *The Diary of Dudley Ryder, 1715-1716*, trans. and ed. William Matthews (London, Methuen, 1939), 327. In that entry for Thurs. Sept. 13, 1716, Ryder had gone “to the waters” and was talking to Dr. Lee. “Dr. Lee said that a physician of the King’s told him his blood was corrupted and his seed so bad by the pox that it was impossible for him to get a child that could live.” William Matthews noted that this comment was about the King’s blood.

¹⁴⁷ For discussion on prostitutes, libertines, and venereal disease, see Randolph Trumbach, “Chapter Seven: The Foul Disease,” in *Sex and the Gender Revolution: Volume One; Heterosexuality and the Third Gender in Enlightenment London* (Chicago: University of Chicago Press, 1998), 197-225.

¹⁴⁸ Duncan, *Medical Cases*, 214.

circulated about “being infected sine coitu,”¹⁴⁹ such as by sharing beds or, as Charles Armstrong related, from sharing clothes, as claimed by a cross-dressing lady who Armstrong suspected fabricated her story to cover her unchaste behaviour.¹⁵⁰ More importantly for gonorrhoea, several behaviours could contribute to that malady, although they were not specifically sexual. There was uncertainty about why some became ill after congress with an unclean person while others did not.¹⁵¹ What caused the variations in the severity of symptoms among patients? How were these diseases spread during sexual congress?¹⁵² Where was the “seat” of the disease?¹⁵³ Even amid these uncertainties, the effects on animal spirits were consistently advanced in eighteenth-century treatment adverts, moral tracts, pathology treatises, and case studies.

From Pleasure to Pain

The first sign of gonorrhoea, or venereal infection generally, was an impulsive desire for sex—reminding the infirmed from whence the coming sorrows came. As the physician Nikolai Detlef Falck wrote, “In the beginning of the first symptom of a virulent gonorrhœa, the patient is greatly stimulated to venery, and will sometimes have nocturnal emissions, even profusely so.”¹⁵⁴ It is uncanny how many physicians included this symptom in their descriptions, perhaps a remnant from the extensive plagiarism and liberal copying among authors, but most definitely a clear message that from sexual desire springs pain and destruction. This “titillation felt in the part” caused an erection that was “involuntary and frequent, especially when in bed.”¹⁵⁵ Although not the most harrowing symptom, it signaled that something was amiss with the animal spirits and that the organs of generation were acting abnormally. A surgeon from Wolverhampton, Thomas Garlick, related that he knew “several young Gentlemen, who in the Height of their Runnings have expressed a greater Desire of Women, than at any other Time.”¹⁵⁶ This surge in desire happened to infected women also. Jean Astruc, professor of medicine at Montpellier and Paris, described a

¹⁴⁹ Armstrong, *Virulent Gonorrhoea*, 2.

¹⁵⁰ *Ibid.*

¹⁵¹ Duncan, *Medical Cases*, 214.

¹⁵² Theories discussed included miasmas, pus, corrupted seed, and bad humours.

¹⁵³ See John Andree, *An Essay on the Theory and Cure of the Venereal Gonorrhoea, and the Diseases which happen in Consequence of that Disorder* (London, 1777), 11-2. Andree described his dissection investigations for the seat of gonorrhoea. Boerhaave listed four seats of gonorrhoea that corresponded to sequential stages as the malady progressed. Herman Boerhaave, *Dr. Boerhaave's Academical Lectures on the Theory of Physic...* (London: W. Innys, 1742-46), 5: 79.

¹⁵⁴ Falck, *Venereal Disease*, 57. See John Astruc, *A Treatise of the Venereal Disease, in Six Books*, trans. William Barrowby (London, 1737), 1: 247. Astruc mentioned pleasant sensation as important for diagnosing gonorrhoea.

¹⁵⁵ Smyth, *New Treatise*, 14.

¹⁵⁶ Garlick, *Mechanical Account*, 2.

frequent and involuntary “rigidity of the *vagina*, with an erection of the *Clitoris*, even without lascivious thoughts.”¹⁵⁷

Yet, this unwarranted desire and arousal went unsatisfied. A stock name in venereal disease discussions, William Cockburn, described how in the infected of both sexes an “Efflux of Matter” was not the “Cause, or Effect, of *Desire*” and would “run out without any *Sense of Pleasure*.”¹⁵⁸ Likewise, the surgeon John Clubbe wrote that, once genitalia were diseased, “every stimulus applied to them when diseased will occasion them to act independent of the mind, as forcibly as by the most desirable object, involuntary emissions must necessarily happen.”¹⁵⁹ This involuntary sexual desire and arousal was cursed with insensibility, even upon emission. Importantly, these symptoms were definitive for gonorrhoea generally: a frequent and involuntary loss of seed without pleasurable feeling. The late seventeenth-century medical professor, Robert Johnson, likewise differentiated simple gonorrhoeas as being synonymous to the running of the reins, which involved “a Flux of natural Seed of Man or Woman unwittingly”¹⁶⁰ whereas, only “if the *Gonorrhoea* be virulent, it is a *praeludium* to the Pox.”¹⁶¹ Nonetheless, both kinds of gonorrhoea involved an insensible loss of seed and unnatural moments of arousal. According to George Warren, a surgeon, when “Seed is thrown out without Pleasure or Erection,” it was a “Simple *Gonorrhœa*,” which disorder also included “Nocturnal Pollution.” Warren explained that a simple gonorrhoea is different from the “Contagious One which proceeds from impure Embraces.”¹⁶² These unnatural runnings of semen, Astruc suggested, meant “the *stimulus* to acts of Venery will but seldom attack the Patient.”¹⁶³ He further elaborated that when “the *semen* may be collected in greater plenty in its receptacles” it has “more power to kindle up lust.”¹⁶⁴ Therefore, a continued loss of seed in a gonorrhoea inhibited healthy lust and desire.

The association between desire and gonorrhoea worked another way—those who were unusually inclined to sex were more prone to gonorrhoeas. The author of the 1673 book *Prothylantinon* suggested that “*Pockie Women*” are most infectious “when the Venom

¹⁵⁷ Astruc, *Treatise of the Venereal Disease*, 1: 260.

¹⁵⁸ Cockburn, *Symptoms, Nature, Cause, and Cure*, 60.

¹⁵⁹ John Clubbe, *An Essay on the Virulent Gonorrhoea; in which the Different Opinions Respecting the Treatment of the Disease are Carefully Examined* (London, 1786), 26.

¹⁶⁰ Johnson, *Enchiridion Medicum*, 286.

¹⁶¹ *Ibid.*

¹⁶² Warren, *New Method of Curing*, 1. See Thomas Willis, “Pharmaceutice Rationalis, the First and Second Part,” in *Dr. Willis’s Practice of Physick...* (London, 1684), 27; Friedrich Hoffmann, *A System of the Practice of Medicine* (London, 1783), 2: 407. Both Willis and Hoffman made the same distinction between simple and virulent gonorrhoea.

¹⁶³ Astruc, *Treatise of the Venereal Disease*, 1: 332.

¹⁶⁴ *Ibid.*, 1: 333.

and Humours are most agitated and heated with *Wine, Heating Drinks, and burning Lust*.¹⁶⁵ Concerns about heating venom and humours shifted to concerns about agitating animal spirits. In his *The Scourge of Venus and Mercury*, John Sintelaer gave an anecdote about a man of “28 or 30 Years of Age” who “being not only much addicted to *Venery*, but also to frequent Debaucheries in Wine and a luxurious Diet, had contracted ... a *simple Gonorrhœa*.”¹⁶⁶ Placing even wider restrictions, William Buchan’s *Domestic Medicine* recommended that “venereal pleasures and violent exercises of all kinds, especially riding on horseback, are to be avoided.”¹⁶⁷ Likewise, Edward Strother, author of *The Practical Physician for Travellers*, explained that gonorrhoea “happens mostly to those who ride Post” because of the “Shocks given by the odd Creatures rid upon.”¹⁶⁸ Over-stimulated animal spirits were liable to leak out and cause the same pathology as a venereal infection. For this reason, medical advice usually recommended that “every thing that tends to excite the venereal imagination should be studiously avoided.”¹⁶⁹ Desire, arousal, and any manner of vigorous motions simply exacerbated the already disturbed spirits. The body *and* the mind had to be guarded against unsettling the spirits to disease-causing extents.

While gonorrhoea muted pleasure, it enhanced pain and discomfort. Cockburn gave a physiological explanation of this switch from pleasure to pain: “the Nervous Fibres are more exposed to harsh Feelings, so that Bodies that either gave Pleasure or did not affect these Parts with any sort of feeling, can now give them Pain.”¹⁷⁰ In other words, nerves that once conveyed pleasure became attuned to painful stimulus. The most distinct pain occurred during urination, but phimoses and glandular swellings¹⁷¹ in the testicles and groin also caused unease. Penile phimosis, according to Perry, followed from the infection “irritating its nervous Fibres, contract them violently, and so render its whole Substance rigid, crisp,

¹⁶⁵ L. S., *Prothylantinon, or, Some Considerations of a Notable Expedient to Root Out the French Pox from the English Nation with Excellent Defensive Remedies to Preserve Mankind from the Infection of Pocky Women* (London, 1673), 46.

¹⁶⁶ John Sintelaer, *The Scourge of Venus and Mercury, Represented in a Treatise of the Venereal Disease* (London, 1709), 140.

¹⁶⁷ William Buchan, *Domestic Medicine: or, a Treatise on the Prevention and Cure of Diseases by Regimen and Simple Medicines*, 2nd ed. (London, 1772), 611. See Clubbe, *Essay on the Virulent Gonorrhoea*, 34. Clubbe recommended avoiding horseback riding, “violent exercise,” and wine, but promoted cleanliness to help cure the disease. Likewise, *A Short Treatise on Onanism* warned that horse riding could cause involuntary emissions: “when the retaining vessels are so extremely relaxed, as to permit the seminal juices to pass off upon the slightest stimulus, as a luscious idea, or conversation with a woman, after straining at the discharge of the excrements, or after riding on horseback.” *A Short Treatise on Onanism; or, the Detestable Vice of Self-Pollution...* (London: printed and sold by Fletcher and Co., 1767), 29-30.

¹⁶⁸ Edward Strother, *The Practical Physician for Travellers, whether by Sea or Land* (London, 1729), 178.

¹⁶⁹ Samuel Foart Simmons, *Observations on the Cure of the Gonorrhœa* (London, 1780), 16.

¹⁷⁰ Cockburn, *Symptoms, Nature, Cause, and Cure*, 62.

¹⁷¹ Known as buboes.

and tense. And from hence likewise proceeds the Curvation of the *Penis*, and that exquisite Pain felt in Erektion, which we call a *Chordee*.¹⁷² With such pain, Astruc was certain that “neither the Man therefore, nor the Woman, as long as they labour under an inflammatory Gonorrhœa, can undergo Venereal discipline without great pain.”¹⁷³ Again, the cause of the disease—sex—was restricted by the disease. Regarding testicular pain, Warren suggested that “the *Testicles* are likewise often swell’d...but from the consent of Parts, when the Inflammation and Pain are communicated from the *Urethra* by means of the Nerves.”¹⁷⁴ This notion of consent was central to how symptoms and sensations radiated from the seat of infection, in the genito-urinary canal, throughout the entire body. In eighteenth-century nervous bodies, the entire constitution sympathized with hurting genitalia.

Description of the exact source of pain varied greatly; one author termed it a “morbifick acid Venom”¹⁷⁵ and another an “acrimonious eroding liquor”¹⁷⁶—both refer to burning or caustic qualities reminiscent of the burning sensation in *ardor urinae*. For many of the infected, this pain would eventually subside as the disease ran its course. However, some were not so fortunate as to have the disease readily quit their bodies. Encouraging the ill to seek medical assistance, Armstrong cautioned that “by neglect, improper treatment, or a continued course of venery, many painful and dangerous symptoms may yet succeed.”¹⁷⁷ The well-travelled and prolific medical practitioner, instructor, and writer, Gideon Harvey wrote extensively on venereal disease. In his 1678 case study *Casus Medico-Chirurgicus* he observed the constitutional effects of gonorrhœa as dependent upon disrupted animal spirits: “At length, there was so great a Debilitation of the Nerves and Brain, occasioned by the frequent return of the Pains, and regurgitation of the venomous Gleet, that it oft-times cast the Patient into *Cataleptic* Fits.”¹⁷⁸ This woeful state of Harvey’s patient perpetually worsened, with “His Body being dayly more and more macerated, his Spirits diminishing, and Strength extremely impairing, God Almighty was pleased to deliver him of all his miseries.”¹⁷⁹ During the time of animal spirit physiology, anything that seriously affected the nerves—even sensations—wasted the body.

Medical texts depicted the progression of pain in gonorrhœa with the intention of filling readers with anxiety and apprehension, thereby spurring them to seek the author’s

¹⁷² Perry, *Mechanical Account and Explication*, 265.

¹⁷³ Astruc, *Treatise of the Venereal Disease*, 1: 260.

¹⁷⁴ Warren, *New Method of Curing*, 54.

¹⁷⁵ *A Full and Plain Narrative of All the General Symptoms of a Clap* (London?: s.n., 1728), 4.

¹⁷⁶ Thomas Gibson, *The Anatomy of Humane Bodies Epitomiz’d...* (London, 1682), 127.

¹⁷⁷ Armstrong, *Virulent Gonorrhœa*, 8.

¹⁷⁸ Gideon Harvey, *Casus Medico-Chirurgicus, or, a Most Memorable Case, of a Noble-Man Deceased wherein is Shewed His Lordship’s Wound* (London, 1678), 154-5.

¹⁷⁹ *Ibid.*

medical advice and remedies. This competition for customers prompted Bree to complain that, even though treating venereal disease was “the sole province of the regular surgeon, yet every physician and every apothecary (if we except the most respectable part of the profession) will greedily grasp at all the cases submitted to their inspection.”¹⁸⁰ These disputes reveal, as Roy Porter described, how “sexually transmitted diseases formed the site of massive controversies between ‘generalists’ and ‘specialists,’ between physicians and surgeons, and between regulars and empirics.”¹⁸¹ A clamour of medical authorities and remedy vendors proffered their own opinions and wares,¹⁸² often enticing customers with promises of pain alleviation. Yet, remedies to relieve pain from sexual disease usually promised pitifully little, as instanced by the commonly prescribed poultice of bread crumbs and milk—a better cure for hunger than pain.¹⁸³

Running Seed, Low Spirits

Painful urination was not the only sure and early sign of gonorrhoea; as Edward Dunn wrote, “the manifest Signs of this *Distemper* are a Running of a yellow, brown, or

¹⁸⁰ Bree, *Observations Upon the Venereal Disease*, 3.

¹⁸¹ Roy Porter, “‘Laying Aside Any Private Advantage:’ John Marten and Venereal Disease,” in *Secret Malady*, 52.

¹⁸² Perry began his discussion on the disease by admitting that “MANY Pens have been employed, and several Volumes written, upon this Subject.” Perry, *Mechanical Account and Explication*, 254. This unwieldy corpus of texts on venereal disease prompted some eighteenth-century authors like Jacques Daran and Jean Astruc to offer extensive bibliographies on the subject. Daran provided a “List of the Authors, mentioned in this Treatise.” “Albert the Great, Alberti, Astruc, Baglivi, Bartholin (Thomas), Blancard, Cardanus, Clesus, Cockburne, Col. De Villars, Cowper, Herman (Paul), Hippocrates, Hoffman (Frederick), Lister, Littre, Masson, Mayerne, Musitanus, Palfin, Fliny, Sydenham, Ucai, Vercelloni.” Daran, *Complete Treatise on the Virulent Gonorrhoea*, 87-88. When Jean Astruc wrote his monumental treatise on venereal disease, published in . . . , he included an index of all the authors “Who have written particularly” on that malady. That list numbers . . . different authors, and notably includes Thomas Sydenham, Daniel Turner, Herman Boerhaave, Jean Astruc, William Cockburn, and John Hunter all were all seen as insightful and well-versed on the topic. Peter Clare also referred to Sydenham’s book of 1685, Turner’s of 1731, and Boerhaave’s. Peter Clare, *Treatise on the Gonorrhœa* (London, 1781), 2. Duncan lauded Boerhaave’s work. Duncan, *Medical Cases*, 222. Samuel Foart Simmons referred especially to Sydenham, Boerhaave, and Astruc. Simmons, *Observations on the Cure*, preface. These authorities tended to appear in not only their own texts; flagrant plagiarism was common, which situation led Nicholas Robinson to lament in his 1736 treatise that “most of our Modern Writers, have gleaned their Materials from either *Fallopious’s* Treatise of the Venereal Disease, *Mr. Wiseman’s* eighth Book of Observations, or *Gedion Harvey’s* Dissertation on the Pox, intituled, His *Venus Unmask’d*.” Nicholas Robinson, *A New Treatise of the Venereal Disease* (London, 1736), 5. Allen labeled Harvey’s work “a quirky 1672 screed.” Allen, *Wages of Sin*, 44.

¹⁸³ Armstrong, *Virulent Gonorrhoea*, 39. Armstrong suggested that “A bread and milk poultice, is the easiest prepared, and one of the best application” for bringing a bubo “to maturity.” The remedy was also advised in William Ellis, *An Essay on the Cure of the Venereal Gonorrhœa, in a New Method. With Some Observations on Gleets* (London, 1771), 29.

green *Matter*, sometimes also bloody, a great and intolerable *Pain* in making *Water*.”¹⁸⁴ Attending practitioners closely examined this “*Matter*” in calculating their diagnoses.¹⁸⁵ According to Cockburn, the colour of the running indicated whether the gonorrhoea would continue, worsen, or subside.¹⁸⁶ Some differentiated simple and venereal gonorrhoeas by different secretion colours.¹⁸⁷ But, authors disagreed as to what this matter—that soiled and stained patient’s linen in dull palettes—actually was. Many writers took their cue from the malady’s name, and understood the running matter to be seed, which some further described as corrupted or unprolific. But empirical observations ran counter to that traditional notion. As Gideon Harvey described in his 1670 *Little Venus Unmask’d*:

the matter that drops out at the Yard, is neither Seed nor seedy; for Seed be it never so much alter’d, hot, yellow, or green, yet it will keep its clamminess, and be ropy, so that it may be drawn from one another between ones fingers; whereas that which gleans in the Running of the Reins, is not at all clammy or ropy, nor can it be drawn between the fingers, but falls all into small drops, and is perfect matter, such as is bred in Ulcers. Besides, should all that dropping in a pocky running be Seed, it would wast a Man to nothing.¹⁸⁸

Some eighteenth-century authors, such as Garlick likewise argued that it was not infected seed, but rather pus.¹⁸⁹ Yet, many followed Harvey’s perspective and associated the loss or corruption of seed with gonorrhoea. Therefore, considering the amount of animal spirits expended in creating seed, the continual and insensible loss of seed threatened nervous and physiological collapse.

Older theories and anecdotal evidence emphasized the role of seed in generating or spreading the disease, such as in the theory that venereal disease came from the mixing of several men’s seed in one womb.¹⁹⁰ Falck supported this theory, and at length expounded

¹⁸⁴ Edward Dunn, *A Compendious and New Method of Performing Chirurgical Operations, fit for Young Surgeons* (London, 1724), 181.

¹⁸⁵ See Thomas Willis, *The Remaining Medical Works of that Famous and Renowned Physician Dr. Thomas Willis* (London, 1681), 9; *Full and Plain Narrative*, 4; Turner, *Discourse Concerning Gleans*, xxiv; and George Fordyce, *Elements of the Practice of Physic*, 2nd ed. (London, 1768), 2: 135.

¹⁸⁶ Cockburn, *Symptoms, Nature, Cause, and Cure*, 57.

¹⁸⁷ Warren, *New Method of Curing*, 10-1.

¹⁸⁸ Gideon Harvey, *Little Venus Unmask’d, or, a Perfect Discovery of the French Pox* (London, 1670), 48.

¹⁸⁹ Garlick, *Mechanical Account*, 1.

¹⁹⁰ For several explicit accounts of women having sex with a multitude of men in a short period of time without the consequence of venereal disease, see Marten, *Degrees and Symptoms*, 24. Marten, therefore, confuted the mixed seed theory for the origination of the pox. Many medical authors, such as Warren, understood the disease as originating from the “Mixture of Divers Seeds” in one womb. Warren, *New Method of Curing*, 16. Concerning

how “promiscuous copulation generates the venereal disease,” especially when one woman and numerous men or one man and numerous women are involved.¹⁹¹ Therefore, certain debauched behaviours generated new infections.¹⁹² His proof was from *common* observation:

It is a custom too frequent among the honest tars, to go in parties to a prostitute, (particularly in places where there are but few of them) to have a bit of fresh meat as they term it. Jack will next come to the doctor, and damn the whore’s eyes and limbs, that she has given him the glim: But can’t think as how Frank and Tom, should escape, as they both boarded her before him. In like manner, when a siren is let loose amongst a parcel of good stomachs, either on board a man of war, or in a camp; though she at first appears ever so dainty and clean a bit, she will soon prove a fire-ship.¹⁹³

As convincing as Falck’s sailor scenario was, other writers understood sexual diseases to have very little to do with seed. The surgeon Thomas Gibson thought gonorrhoea was a “continual efflux of Seed;”¹⁹⁴ yet, he reasoned that it could not be a *true* seed, for if it were, “they could never endure a *Gonorrhoea* so long (some, thirty years) without more notable weakning and emaciating, the flux being so large as sometimes it is.”¹⁹⁵ It was difficult to imagine that a continued loss of seed would not quickly cause death. Yet, accepted physiology and pathology maintained that the loss of seed, or kind of seed, and animal spirits produced the symptoms of gonorrhoea. Without the loss of animal spirits, there was no explanation as to why a gonorrhoea should so weaken the body and mind. For this reason, Gideon Harvey had qualified that not “all that dropping in a pocky running be Seed,” but allowed that some was.¹⁹⁶ While physiologies connected animal spirits, nerves, and seed, the general opinion was similar to Dunn’s: that the running was “a Mixture of imperfect Seed and Pus.”¹⁹⁷ The idea that only pus ran from infected genitals would not gain widespread acceptance until inoculation experiments using pus from ulcers in the latter half

other theories of how venereal disease originated, see Warren, *New Method of Curing*, 3-4. Warren reiterated numerous theories, such as Paracelsus’ idea that venereal disease originated with a French man with leprosy having an “impure Congress with a Debauch’d Woman who had her Terms” and also Dr. Lister’s idea that it was brought by the Spaniards from America, “and that it was Originally derived to the Natives of those Islands from some Persons who had been bitten by the Serpent *Inguina*.”

¹⁹¹ Falck, *Venereal Disease*, 84-85.

¹⁹² *Ibid.*, 79.

¹⁹³ *Ibid.*

¹⁹⁴ Gibson, *Anatomy of Humane Bodies*, 120.

¹⁹⁵ *Ibid.*, 127.

¹⁹⁶ Harvey, *Little Venus Unmask’d*, 48.

¹⁹⁷ Dunn, *Compendious and New Method*, 185.

of the eighteenth century, around the same time that animal spirit theories faded from notice.¹⁹⁸

The involuntary outflowing or running of seed was more precisely termed a gleet. This symptom of venereal disease could be short-lived and benign or long-lasting and utterly incapacitating, even lethal. A gleet was nearly synonymous with a simple gonorrhoea; however, some authors applied “gleet” to various other non-genital maladies. Felix Platter described various injuries that had “Nervous parts that gleet water.”¹⁹⁹ A later paper, *A Rational Account of the Gleet*s, gave a general definition: “By a GLEET is understood an *Involuntary* and almost constant Efflux or *Dripping* away of Matter from a Human Body, and that in much the same Quantity, whether the Person be asleep or awake.”²⁰⁰ By far a gleet was most commonly associated with gonorrhoea, although, as Patter’s usage suggests, there was also a strong connection with nerves. Genital gleet could occur from “excessive Exercise of *Venery*.”²⁰¹ The author of a short tract discussing inoculation trials made on male and female subjects suggested “a weeping and thin discharge from the urethra, are very often the consequences of too frequent embraces; of a gonorrhœa improperly treated; or of bad practices.”²⁰² George Fordyce provided a longer list of causes, suggesting “it may remain after the venereal matter has been destroyed or washed off in a venereal *gonorrhœa*; or it may arise from general weakness, severe purging, exercise, frequent coition, cold, and intoxication with wine, and especially in those who have had long and frequent *gonorrhœas*.”²⁰³ Although often an early sign of gonorrhoea, gleet could continue long after the patient had recovered from the disease, and in both males and females. The anonymously authored *London’s Medicinal-Informer* claimed that a gleet was distinguished as “a Flowing of Matter (altogether free from a *Venereal Infection*)” and that the “the Disease call’d (*Fluor*

¹⁹⁸ After Garlick, John Freke suggested that “A *Gonorrhœa* proceeds from too great a Quantity of that *Mucus*” that lines the urinary canal, which conclusion would later be affirmed by John Hunter. John Freke, *An Essay on the Art of Healing* (London, 1748), 194. Hunter would later give the following history: “Till about the year 1753 it was generally supposed, that the matter from the urethra in a gonorrhœa arose from an ulcer or ulcers in that passage; but from observation it was then proved that this was not the case.” Hunter credits his brother William with making this discovery in 1749. Hunter, *Venereal Disease*, 29. However, Garlick, as Hunter later would, supposed that transmission of the disease was through pus. Garlick, *Mechanical Account*, 1.

¹⁹⁹ Felix Platter, *Platerus Golden Practice of Physick Fully and Plainly Discovering...* (London, 1664), 443. For a similar use of the word “gleet,” see Gideon Harvey, *The Vanities of Philosophy & Physick Together with Directions and Medicines Easily Prepared by any of the Least Skill* (London, 1699), 19, 127-8.

²⁰⁰ *A Rational Account of the Gleet*s, 4. This author also affirmed that a gleet is not a gonorrhoea (6).

²⁰¹ Sintelaer, *Scourge of Venus and Mercury*, 134.

²⁰² An Eminent Surgeon, *A Gonorrhœa, and the Effects of the Application of Venereal Matter, to the Parts of Generation of Both Sexes...* (London, [n.d.]), 15.

²⁰³ Fordyce, *Practice of Physic*, 2: 135.

Albus) the *Whites* in Women, is analogous to a *Gleet*, or *Weeping* (as some call it) in Men.²⁰⁴ Oliver perceived that “Gleets are very troublesome to Men, but much more to Women.”²⁰⁵ Even in his 1786 treatise, Hunter acquiesced that “the distinction between a gonorrhœa and a gleet is not yet ascertained.”²⁰⁶ Yet, gleets generally alluded to a continued running from the urethra or vagina, to the detriment of the nervous system.

Consequences of a gleet were profound, for, as Falck asserted, “there is nothing will enfeeble a man so much as an obstinate gleet; and the younger the patient is, the more there is to be feared, and the more difficult to be cured.”²⁰⁷ Medical writers agreed that a venereal gleet could carry itself off, carry on for years without further hurt, or carry the infirmed straight to the grave.²⁰⁸ “Those who have long Laboured under a violent *Gonorrhœa*,” expounded Astruc, “are frequently subject for some months and sometimes years afterwards, nay sometimes for the rest of their lives, to suffer and involuntary discharge of *semen*, without any sense of pleasure, or at least with very little.”²⁰⁹ This reference again to insensibility was coupled with a warning that upon the least exertion or “when they have lascivious thought, or upon erection” the gleet will run.²¹⁰ Again, the erotic imagination inspired profound pathological effects in the organs of generation.

The most immediate parts to be enfeebled were the genitals.²¹¹ The author of “The Natural History of the *Arbor Vitæ*” warned that a “foul *Vulvaria*” causes a man’s member to be “Despon’d of all its Energy.”²¹² However, the entire constitution could also be affected. The principle of sympathy that explained how pain radiated through the body also explained the spread of weakness. Falck gave the physiological reason for this debilitation: “That, as the semen, is the most nervous, and elaborated humour in the body, consequently it drains the blood, and nutriment, the more of the sustenance peculiar to the support of the nerves; and whilst it is wasted, it cannot but waste the nerves; and consequently the main spring, or *primum mobile*, of the whole animal machine.”²¹³ Put more concisely, Dunn suggested that

²⁰⁴ *London’s Medicinal-Informer* (London, 1710), 90.

²⁰⁵ William Oliver, *A Practical Dissertation on Bath-Waters* (London: J. D., 1716), 115.

²⁰⁶ Hunter, *Venereal Disease*, 94.

²⁰⁷ Falck, *Venereal Disease*, 57.

²⁰⁸ Fordyce, *Practice of Physic*, 2: 135.

²⁰⁹ Astruc, *Treatise of the Venereal Disease*, 1: 331.

²¹⁰ *Ibid.*, 331.

²¹¹ Many medical authors observed this weakness. Smyth noted that “if the seminal discharge be very great, whether by way of running, or from nocturnal emissions; in either case the balsamic and spirituous parts of the blood will be gradually exhausted, so as to render the parts of generation totally debilitated.” Smyth, *New Treatise*, 51.

²¹² “The Natural History of the *Arbor Vitæ*...,” in *The Works of the Earls of Rochester, Roscomon, and Dorset: the Dukes of Devonshire, Buckinghamshire, &c.* (London, 1777), 2: 166.

²¹³ Falck, *Venereal Disease*, 141.

“continual Running causes a great *Dissipation* of Spirits.”²¹⁴ The wasting effect of a gleet gradually spread, as the “Parts adjacent being defrauded of their proper Nourishment, first cause Weakness in the Loins, then in the Back, and by degrees affect the whole Body with Hectick Heats all over, and an universal Consumption.”²¹⁵ Likewise, the physician and surgeon James Cooke suggested that, if left unchecked, gonorrhoea eventually “by degrees defiles the whole Body.”²¹⁶

These drastic consequences of a seemingly innocuous dribbling were denied by some. William Oliver reasoned that in a gonorrhoea “the seed flows, nor is it possible to suppress it even in the time of sleep, for whether one sleeps or is awake its flow is incessant, and imperceptible;” however, this malady “is not deadly but it is an affection unseemly and unpleasant.”²¹⁷ Sintelaer used his perception of gonorrhoea as a moderate affliction to argue that gleans could not be “*pure Seed*.” If they were pure seed, “no Man would be able to endure so long and copious a Flux” as that patient would “in a short time fall into such a *Tabes* or *Consumption*, as would soon put an End to his Days.”²¹⁸ Morgagni supported this conclusion by observing how “some of the physicians began to suspect, that what flows from the urethra, in a legitimate gonorrhœa, is not always real semen; as they saw that many did not grow so thin, and become enervated, as they must in course have done, from so great a quantity of humour being discharg’d.”²¹⁹ Yet, many practitioners did see, or at least said they saw, patients with gleans wasting away from a loss of nervous juice.²²⁰

In the body, a gleet caused various wasting diseases, specifically consumptions²²¹ and *tabes dorsalis*.²²² “But truly these terms of *Phthisis* and *Tabes*,” reasoned Thomas Willis, “in their proper signification denote an Atrophy, or a withering away of the solid parts with debility of strength.” Willis, like successive writers, concluded that in a gleet the “pining away of the whole body takes its rise from the meer fault of the blood, or chiefly from the

²¹⁴ Dunn, *Compendious and New Method*, 181.

²¹⁵ Oliver, *Practical Dissertation*, 115.

²¹⁶ Cooke, *Mellificium Chirurgiæ*, 234.

²¹⁷ Aretæus, of Cappadocia, *Aretæus, Consisting of Eight Books...*, trans. John Moffat (London: J. Walter and W. Richardson, [1785?]), 224.

²¹⁸ Sintelaer, *Scourge of Venus and Mercury*, 136.

²¹⁹ Giambattista Morgagni, *The Seats and Causes of Diseases Investigated by Anatomy* (London, 1769), 2: 607.

²²⁰ Willis, *Dr. Willis's Practice*, 26.

²²¹ Also called *phthisis* and now known as tuberculosis.

²²² A degenerative nerve disorder now known to follow from syphilis. According to the introduction to *Secret Malady*: “If a person developed tertiary syphilis, which was often announced by symptoms similar to the second stage, he or she would most likely also develop the disease in his/her brain and throughout his/her cardiovascular system. Dementia and death would follow, but the process could be slow and extremely painful” (9).

nervous juice.”²²³ The near association of gonorrhoea with *tabes dorsalis* led Willis to further observe that “*Tabes Dorsalis*, although it hath almost lost its name in this our Age, or perhaps changed it into a Gonorrhoea, yet *Hippocrates* makes mention of it, and handling it avowedly, he assigned a twofold kind thereof, viz one from immoderate Venery, and the other from a distillation into the Spine of the Back.”²²⁴ Besides the telling conflation of *tabes dorsalis* with gonorrhoea, little revision was made of the Hippocratic nosology, although the connection between a loss of seed and nerve diseases was emphasized by Willis and others throughout the era.²²⁵

For Willis, this loss of seed in either males or females could be voluntary such as in sexual intercourse or masturbation, or involuntary such as in the case of disease, injury, or nocturnal emissions.²²⁶

The immoderate use of Venery, yea involuntary efflux of the seed, if it be either great or continual, produce a faintness in the whole body, and at length a pining away. The reason of this (as we have intimated in another place) is not, that the seed, according to the opinion of some, descends from the Brain through the Nerves into the spermatic bodies, and from thence, by reason of a great loss thereof first the Brain, and then the parts, all depending on the influence of the Spirits springing from thence, become infirm and pine away.²²⁷

²²³ Willis, “Pharmaceutice Rationalis, the First and Second Part,” in *Dr. Willis’s Practice*, 25.

²²⁴ *Ibid.*, 27.

²²⁵ Oliver, *Practical Dissertation*, 115. Johnson listed “*Gonorrhoea*, Nocturnal Pollutions, want of Nourishment” as causes of consumptions. See Johnson, *Enchiridion Medicum*, 85.

²²⁶ Willis, “Pharmaceutice Rationalis, the First and Second Part,” in *Dr. Willis’s Practice*, 27. For the connection between masturbation and gonorrhoea in eighteenth-century medical discussions, see Michael Stolberg, “An Unmaly Vice: Self-Pollution, Anxiety, and the Body in the Eighteenth Century,” *Social History of Medicine* 13, no. 1 (2000): 4. This connection was also described in *A Short Treatise on Onanism*, “The frequent repetition of these execrable pleasures induce an infinitude of the worst disorders; such as Lethargies, Vertigo’s, Atrophys, Apoplexies, Palsies, Lowness of Spirits, Hypochondriacal Disorders, Amauroses, a *Tabes Dorsalis*, and the worst species of *Gonorrhæa*, most commonly attended with an utter impotence as to real enjoyments; beside an innumerable train of various nervous complaints.” *Short Treatise on Onanism*, 13.

²²⁷ Willis, “Pharmaceutice Rationalis, the First and Second Part,” in *Dr. Willis’s Practice*, 27. Willis also suggested “That from the immoderate use of *Venus*, also from an inveterate *Gonorrhoea*, from Stumous or running Ulcers, and other Impostumes, by which much of the nervous Juyce is wasted, a leanness or wasting of the whole Body is produced.” “The loss of the seed causing a Consumption is sometimes voluntary, of which sort the salacious and prone to Venery do suffer: sometimes involuntary; of which affects there are divers kinds. For in some it only happens by dreams or obscene phantasms” or by overexertion. Willis, “Pharmaceutice Rationalis, the First and Second Part,” in *Dr. Willis’s Practice*, 27. Similarly, Astruc commented that “A plentiful seminal discharge, the balsamic and spirituous parts of the blood will be degrees be exhausted, and bring on a wasting, *Phthisis*,

This sort of brain-drain through “the loss of seed” meant that not only was the brain “defrauded of its due share,” but that “at length the function in the whole body, as well motive as nutritive, doth waver and diminish.”²²⁸ His case in point was that “Our furious Whoremongers are sensible of a great debility about their Loins, and the parts placed below them.”²²⁹ Nearly a century later the physician and man-midwife J. H. Smyth explained that “when we are attacked by acute disorders, we must inevitably submit to their force, for want of the most essential supply to invigorate the animal spirits.”²³⁰ These acute disorders frequently afflicted the brain.

Whether a gleet immediately affected the blood or nervous juice did not matter; animal spirits were still critically disrupted. Harvey applied these consequences to a gleet from a severed nerve, which caused “Inflammations, Imposthumes, Convulsions, and sometimes Syncopees, and upon their continuation, Death.”²³¹ According to Cam’s reckoning, “when the Venom has been a long Sojourner in the Fluids, it begins to affect the Solids, and particularly the *Nerves* and *Bones*. This is a dismal Scene indeed, and many a Bill of Mortality is hid under the Name of a gentle Decay, and a Consumption, which had its Beginning in the Stews.”²³² Likewise, Smyth cautioned, when “the whole nervous system becomes impoverished with an utter impotence for venereal enjoyments.”²³³ His *A Practical Essay on the Venereal Disease*, which went through at least 28 editions by the end of the century, detailed how “the health and vigour being so precipitately exhausted, an immature old age must inevitably ensue; the certain result of these execrable and inordinate passions, even in the very bloom of youth: and I assure the reader, with the greatest veracity, that this vice, too early or excessive venery, and the venereal disease, (with the assistance of mercury) increase the bills of mortality more than all the disorders incident to the human body.”²³⁴ Through an understanding of nervous fluids, which invigorated both body and mind, medical authors saw illicit or excessive sexual behaviour as having absolutely debilitating effects.

Gonorrhoea and Mental Illness

Melancholy, hypochondria, and hysteria afflicted those whose brains suffered from low spirits, and gonorrhoea was the definitive pathology for losing spirits through continued excretion of seed. The brain, however, produced animal spirits and, through those spirits,

and *Tabes Dorsalis*, for the same reason, and from the same cause as in those who waste themselves with immoderate Venery.” Astruc, *Treatise of the Venereal Disease*, 1: 333.

²²⁸ Ibid.

²²⁹ Ibid.

²³⁰ Smyth, *New Treatise*, 53.

²³¹ Harvey, *Casus Medico-Chirurgicus*, 30-1.

²³² Cam, *Rational and Useful Account*, 10.

²³³ Smyth, *New Treatise*, 52-3.

²³⁴ Ibid.

exerted influence over the organs of generation. Therefore, as eighteenth-century pathology had it, nervous disorders of the mind could bring on venereal disorders, including gonorrhoea. This mutual influence, or vicious circle, hinged upon the idea that animal spirits, mental well-being, and sexuality were interdependent and necessarily balanced for good health.

John Marten described this connection between mental illness and sexual disease in great detail:

The Symptoms which presage such Consumptions as these, are (in Men affected with a plentiful *Running of the Reins*) *Hypochondriacal* Oppressions, Melancholly, and too much Thoughtfulness, with loss of Appetite, decay of Strength &c. but in Women that have been long afflicted with the *Whites*, flowing in a great quantity, are a soft and bloted habit of Body, a swarthy and pale Countenance, with *Hysterical* Fits, a remarkable lassitude and weariness of the Body, swellings in the Legs, and decay of Strength, all which Symptoms proceed from the same Cause, to wit, from the poor dispirited Nature of the Blood.²³⁵

For both sexes, mental afflictions and sexual maladies perpetuated each other. Richard Morton's treatise on consumption, originally published in 1694,²³⁶ suggested that "there is nothing that destroys the Appetite, and confirms a Consumption, more than Grief and Sadness."²³⁷ Passions and appetites were similarly affected by both gonorrhoea and consumption. However, passions and emotions could also be the cause of disease. For example, Marten's treatise elaborated how emotions and ideas made people more or less susceptible to venereal infection: "the raging Lust, and hasty desire of Pleasure felt in Congress, may have a Power to dilate, or some way, so to affect these Parts," thereby making them prone to the disease.²³⁸ Sometimes, however, the experience of gonorrhoea by those with nervous disorders was imagined. "Hypocondriacal People, whose Fears and Imaginations are as endless as they are groundless, will at those times that they are really

²³⁵ Marten, *Degrees and Symptoms*, 405. These pathological connections were reiterated by Richard Morton: "The Symptoms which presage this Consumption, I have for the most part observed to be these, to wit, an *Hypochondriacal* Oppression, Melancholy, and too much Thoughtfulness, with a Decay of Strength, and Loss of Appetite in Men that are affected with a plentiful Running of the Reins; but in Women that have long afflicted with the Whites flowing in a great Quantity, a soft and blouted Habit of the Body, a squalid and pale Countenance, together with *Hysterical* Fits, a remarkable Weariness, and decay of Strength." Richard Morton, *Phthisiologia: or, a Treatise of Consumptions* (London, 1720), 20.

²³⁶ See C. S. Breathnach, "Richard Morton's *Phthisiologia*," *Journal of the Royal Society of Medicine* 91, no. 10 (1998): 551-52.

²³⁷ Morton, *Phthisiologia*, 21.

²³⁸ Marten, *Degrees and Symptoms*, 389.

infected, tho' but with some slight and gentle Symptoms, fancy themselves ten times worse than they truly are."²³⁹ Some hypochondriacs insisted on treatment for venereal diseases, although they had no symptoms because, as Marten observed, "so strangely does Melancholly possess some People."²⁴⁰ Even impotency in males could occur "when the Spirits are depressed by Trouble, Grief, Fear, Passions of the Mind, Hypochondriack Melancholy, over-Thoughtfulness, Study, &c."²⁴¹ Bree agreed with this assessment, and specified how "an excess of anxiety in the patient" caused incurable impotency by "irritation of constant uneasiness upon the nervous system."²⁴²

Conversely, gonorrhoea laid the "foundation of hypochondriacal complaints."²⁴³ The mental sequelae from a gleet ranged from feeling a little lugubrious to committing suicide. Such pathology provided the plot for a 1731 poem entitled *The Hyp*. The narrative tells of a "Knight's Combat with Disease *Venereal*, / The terriblest of *Monsters* real"²⁴⁴—gonorrhoea. This malady was discovered by his urine and from his "Dulness of Spirits, Spleen affected, / And Mind?—Extremely much dejected."²⁴⁵ The combination of spirits, spleen, and melancholy pointed squarely to hypochondria, one of the worst symptoms of gonorrhoea.

Further sensationalizing the mental consequences of venereal disease, Marten re-introduced a related malady nearly forgotten in the early eighteenth century, *furor uterinus*. As he described, "some Women have been rendered *Steril* by being grievously afflicted with *Madness* from the *Womb*, called *Furor Uterinus*, or *Womb-Fury*."²⁴⁶ According to his treatise, *furor uterinus* arose "from a vehement and unbridled Desire of *Carnal Embrace*ment, over-powering the Rational Faculty so far, that the Woman is continually almost, in all Places and Companies, talking wantonly and lasciviously, laying aside all Modesty, and by Words and Gestures, inviting all the Men she comes at, to have to do with her."²⁴⁷ This account affirmed the notion that bold and indecent female behaviour could be entirely and uncontrollably derived from the influence of genitalia. Just as in the case of gonorrhoea, mental disorders went hand-in-hand with infertility. Sterility in both women and men indicated major constitutional problems, implicating everything from digestive insufficiency to muscle spasms, but very often fertility problems involved both the mind and reproductive organs. Like the symptoms following *furor uterinus*, male sterility caused a loss

²³⁹ *Ibid.*, 40.

²⁴⁰ *Ibid.*, 42.

²⁴¹ John Marten, *Gonosologium Novum: or, a New System of all the Secret Infirm and Diseases, Natural, Accidental, and Venereal in Men and Women* (London, 1709), 42.

²⁴² Bree, *Observations Upon the Venereal Disease*, 49.

²⁴³ Simmons, *Observations on the Cure*, 19.

²⁴⁴ *The Hyp, a Burlesque Poem* (London, 1731), 3.

²⁴⁵ *Ibid.*, 49.

²⁴⁶ Marten, *Degrees and Symptoms*, 423.

²⁴⁷ *Ibid.*, 423-4.

of bodily abilities, mental reasoning, and masculine behaviour.²⁴⁸ “Insufficiency of the *Genital Liquor in Men*,” Marten expounded, resulted from “a fault in the digestive Faculty, excessive Evacuations, Watchings, &c. Hunger, Cold... Violent Passions of the Mind, immoderate Exercise.”²⁴⁹ Like immoderacies in behaviour and environment, mental and emotional excesses could cripple male reproductive abilities by affecting the animal spirit economy.

Boerhaave labeled venereal disease as a “*Proteus of a Disease*,”²⁵⁰ Sydenham similarly declared that “the shapes of Proteus, or the colours of the Camelion, are not more numerous and inconsistent, than the variations of the Hypochondriac or Hysterical disease.”²⁵¹ Providing some equality in the typically disadvantageous portrayals of hysteria, Giambattista Morgagni suggested that there was “no more in fault in patients of either sex” for the “multiform disorders of women” that, by the “common custom,” were called hysterical affections or those nervous disorders of men “that they call hypochondriacal.”²⁵² He referred to the nervous maladies of both sexes as “*Neuropathia*,” which indicated “the chief disorder is in the nervous system.”²⁵³ More than other disorders, these neural and mental conditions were investigated and defined through case studies. Morton cited a case of an eighteen-year-old girl who “fell into a total Suppression of her Monthly Courses from a multitude of Cares and Passions of her Mind, but without any Symptom of Green-Sickness following upon it.”²⁵⁴ She was “wont by her studying at Night, and continual pouring upon Books, to expose herself both Day and Night to the Injuries of the Air, which was at that time extremely cold, not without some manifest Prejudice to the System of her Nerves.”²⁵⁵ She continued two years until she had “frequent Fainting-Fitts” and was “like a Skeleton only clad with Skin;” she soon after died.²⁵⁶ In the treatise, this case is immediately followed by one of a sixteen-year-old boy who also had a nervous consumption. He followed Morton’s advice to “abandon his Studies, to go into the Country Air, and to use Riding, and

²⁴⁸ *Ibid.*, 4.

²⁴⁹ Marten, *Gonosologium*, 25-6. William Harvey correlated obesity with sterility. William Harvey, *Lectures on the Whole of Anatomy: an Annotated Translation of Prelectiones Anatomiae Universalis*, trans., Charles O’Malley, Frederick Poynter, and Kenneth Russell (Berkeley: University of California Press, 1961), 47.

²⁵⁰ Boerhaave, *Treatise on the Venereal Disease*, 8. Quétel also described it as a protean disease. *History of Syphilis*, 77.

²⁵¹ Thomas Sydenham quoted in Perfect, *Cases of Insanity*, 75.

²⁵² Morgagni, *Seats and Causes*, 2: 628-9.

²⁵³ *Ibid.*, 629.

²⁵⁴ Morton, *Phthisiologia*, 8.

²⁵⁵ *Ibid.*, 8.

²⁵⁶ *Ibid.*, 9.

a Milk Diet” along with prescribed medicines. This patient “recover’d his Health in a great Measure.”²⁵⁷ For both sexes, intensive study or thought threatened mental and bodily health.

Hypochondria and hysteria were particular to the types of people likely to have fine sensibility—the cultured, wellborn, mannered, and educated—and they were maladies not just of the mind, but of the nerves. John Hill’s 1766 treatise *Hypochondriasis* laid out many qualities that raised the likelihood of suffering that mental disease. He suggested certain classes were especially susceptible, whether because of inherited traits or chosen lifestyles.²⁵⁸ One example was the English poet Edward Young, who Hill supposed died of hypochondria. Hill concluded that hypochondria represented the greatest “present danger” to “the best and most improved amongst us.”²⁵⁹ Lifestyle played no small role in managing the disease. Hill advised to “avoid all excesses: drink need scarce be named, for we are writing to men of better and of nobler minds, than can be tempted to that humiliating vice. Those who in this disorder have too great an appetite, must not indulge it; much eaten was never well digested: but of all excesses the most fatal in this case is that of venery. It is the excess we speak of.”²⁶⁰ Descriptions of hysteria and hypochondria were broad; yet, they very specifically aimed at the genteel and had a precise and regular connection between emotions, thoughts, sexual organs, outward appearance, nerves, and spirits.

Eighteenth-century satirists found these affected nervous disorders of the privileged irresistible. These pathologies represented upper-class extravagance and medical effrontery, with suggestions of sexual disorder. *Vitulus Aureus: The Gold Calf*, published mid-century in London and originally authored by Friedrich Christian Schoenau under the pseudonym Joakim Philander, spoofed the seventeenth-century alchemical treatise on transmuting lead into gold by the Dutch physician Johann Friedich Helvetius. In his *Vitulus Aureus*, Schoenau discussed the “hyp,” suggesting it was a disorder “in the Intellectual OEconomy, with which a great many Gentlemen, particularly in the Country, are extreemly afflicted.”²⁶¹ The narrator gives a case of an established and reputable gentleman bachelor who frequented country estates and complained that “the only thing which sowers the Sweets of this innocent Life, is that unaccountable Distemper call’d the *Hyp*.” He provides some colourful details about this malady, noting that in the North “they call it the *Heups*.”²⁶² Continuing the description, he suggests it affected well-to-do gentlemen of any age and makes them “Sowre, Gloomy, Morose, Suspicious, Whimsical, Capricious, and the D-v-l knows

²⁵⁷ *Ibid.*, 10.

²⁵⁸ John Hill, *Hypochondriasis: A Practical Treatise on the Nature and Cure of that Disorder* (London, 1766), 7. Hill also suggested that some ethnicities were more prone to it: Greeks, Jews, Spaniards, and American Indians.

²⁵⁹ *Ibid.*, 8.

²⁶⁰ *Ibid.*, 30.

²⁶¹ Joakim Philander, *Vitulus Aureus: The Gold Calf* (London, 1749), 169.

²⁶² *Ibid.*, 171.

what.”²⁶³ The author’s advertised therapeutic looking glass is recommended for helping such cases.

The hyp, according to this farcical tract, was “a Pericranial Distemper...proceeding from certain gloomy Clouds abounding in the imaginary Faculty; which flying up to the Religion of the Judicial, offuscate the Rays of Reason, and cast such a Damp on them, they can’t exert themselves with any steady Equality in the Conduct of our Lives.”²⁶⁴ The narrator further differentiates the hyp into categories with absurdist names: the whim or “Maggot,” the sullens or “Mulligrubs,” the “Crinkums” or “Hockle-crockles,” the visionaries, the “Rantipoles” or “Altitudes.”²⁶⁵ The sullens or mulligrubs have “their Spirits...so clogg’d, that they think themselves incapable of Life and Motion.”²⁶⁶ They also suffer from obscured reason. “Crinkums” or “Hockle-crockles” were prone to “fancying themselves dying; then on a sudden bursting forth into profuse Laughters, without Rhyme or Reason.”²⁶⁷ “Rantipoles” or “Altitudes” are “not in Men so much as Women; tho’ I have met with some of both Sexes,” although only females were affected with “furious Transports.”²⁶⁸ Philander described it as “worse than Madness” in women. In men, “All your young rakish Fellows, and old ones too, who commit Ten Thousand Extravagances, because it is their Humour forsooth, are more or less push’d on by the Effects of this Distemper.” Their “unaccountable Freaks and Sallies...[are] but evident Symptoms of the Brain’s being sick; and that their Spirits are hurried on by other Impulses than those of Nature and Reason.”²⁶⁹ Like so many pathologies of the time, this satire explained the English disposition to hypochondria as a consequence of climate, diet, and behaviours; but, he also emphasized the ill-effects of holding positions of power, such as the English country gentry did.²⁷⁰ In satirizing those social figures, the tract connected their loose lifestyles with distempered spirits and hypochondria.

Melancholy and gonorrhoea resembled and evidenced each other, and both maladies resulted from problems with the animal spirits. Individuals afflicted with the former illness could be suspected of having the latter. For instance, this connection between gonorrhoea and melancholy may have bolstered James Boswell’s self-perception as a hypochondriac. Several prominent melancholic characters in literature presented this possibility of low spirits from a running of their reins. Another such character was portrayed in “A Description

²⁶³ Ibid., 172.

²⁶⁴ Ibid., 173-4.

²⁶⁵ These descriptions of hypochondria are clearly set out in Edward Cobden’s poem “Morbus Hypochondriacus,” in *Poems on Several Occasions* (London, 1748): 284-302.

²⁶⁶ Philander, *Vitulus Aureus*, 177.

²⁶⁷ Ibid., 178.

²⁶⁸ Ibid., 182.

²⁶⁹ Ibid., 183.

²⁷⁰ Ibid., 186-7.

of Notar C—,” which poem told of a miserly notary who was inclined to “thrifty Whoring.” As the narrative went, “One Time, poor Wretch, it was his Hap, / ’Mong other Things, to catch a Clap.”²⁷¹ The notary endured all of the varied symptoms, underwent a cure, and “Yet, after all, a Gleet remains.”²⁷² A similar curmudgeonly gentleman figure from a sentimental novel was Tobias Smollett’s protagonist of *The Expedition of Humphrey Clinker*, the Welsh squire Matthew Bramble. With his constant anxieties about health, Bramble sought the advice of a quack at Bath and, to Bramble’s offense, was diagnosed as having a venereal infection.²⁷³ Old claps were often depicted as afflictions of the irritable and fickle, like squire Bramble. The idiosyncrasies of people with exceptional sensibility verged on mental illness, which were often attributed to problems in the body.

The mental illnesses associated with sensibility and delicate nerves were especially brought to notice by William Perfect in his late eighteenth-century collection of studies called *Cases of Insanity, the Epilepsy, Hypochondriacal Affection, Hysterical Passion, and Nervous Disorders, Successfully Treated*.²⁷⁴ According to Perfect, mental disorders derived “from some fault in the nervous substance, which is thereby rendered too sensible.”²⁷⁵ Similar to Sydenham’s pathological descriptions, Perfect affirmed that hypochondria had “a multiplicity of symptoms,” so much so that “it is morally impossible to describe every one.”²⁷⁶ Those symptoms included “a loathing of food, want of appetite,” “flushings in the face,” “piles,” “wild ideas, and most extravagant fancies foreboding dreadful events.”²⁷⁷ Hysteria too was a complex syndrome, which included symptoms of “difficult respiration...convulsed agonies of the whole body, involuntary laughter and crying, paleness of the face, coldness of the extremities, oppression, anxiety...dimness of sight...either

²⁷¹ Claudero, “A Description of Notar C—,” *Poems on Sundry Occasions* (Edinburgh, 1758), 20.

²⁷² *Ibid.* The poem continues: “This was to him a great Vexation, / Besides a cursed Inflammation, / The sinful Member did torment, / Which made him girn, curse, and relent; / His Testicles did likewise swell, / And Shankers made him roar and yell; / Great Buboos did his Groins adorn, / Which pain’d him sore both Night and Morn; / A Chordee too did him perplex, / And an Erection sore him vex: / For Surgeon’s Art he did not care, / Fear’d for his P---k, but Pocket mair; / He made a Shift to treat himself, / And thereby sav’d his darling Pelf; / Yet, after all, a Gleet remains, / Which will absorb his aged Veins. / He oft affects the Debauchee, / Thereby to hide his Misery.”

²⁷³ April London, “Avoiding the Subject: The Presence and Absence of Venereal Disease in the Eighteenth-Century English Novel,” in *Secret Malady*, 220. London examines *Joseph Andrews* and *Roderick Random* and in relation to ideas about venereal disease.

²⁷⁴ First published in 1778.

²⁷⁵ Perfect, *Cases of Insanity*, 4.

²⁷⁶ *Ibid.*, 49. In a later case, Perfect gave the following preface: “It is generally allowed difficult to fix a just criterion, by which nervous disorders may be distinguished from others; but where there is a universal delicacy of the whole frame, with too great a degree of sensibility of the nervous system; as in the case I am about to recite, no impropriety can appear in calling the case truly *nervous*” (113).

²⁷⁷ *Ibid.*, 50-1.

relapses into another fit, or falls asleep.”²⁷⁸ Both the symptoms from hysteria and hypochondria—with the exception of piles—are reminiscent of common eighteenth-century literary depictions of sensible and afflicted characters.

However, Perfect, writing in later in the century, emphasized the weakness or delicacy of nerves in females more than was commonly done in earlier medical writings. Perfect suggested hysteric passions happened “upon any sudden commotion of the mind, or disturbance of the spirits; by fear, grief, anger, or disappointment; wind, and acrid humours, velicating the nerves of the stomach and intestines, will frequently produce the fits in women of a delicate habit, whose nervous system is naturally weak and irritable.”²⁷⁹ But, consistent with eighteenth-century thought, Perfect closely associated mental illness with the organs of generation. In Perfect’s view, madness arose “from Epilepsy, Child-birth, Fevers, Intenseness of Study, irregular Living, or strong and ungoverned Passions.”²⁸⁰ These nervous disorders became more gendered, and the role of sexual desires and feelings in those disorders became less prominent, but the connection between the mind and groin was still a central concern.

Most of the case studies Perfect described hint at the importance of sexual behaviour in altering mental conditions of those suffering from nervous disorders. For instance, case XI in his text recounts a young lady of nineteen years and a delicate constitution who was “suddenly seized with a depression of spirits, want of appetite, giddiness, and great pain and uneasiness in the back, without any probable reason for such an alteration in her mind and health.”²⁸¹ She had a high pulse and, with “the affection of the mind very great, she sighed often, looked despondent, shed tears, and breathed quick and hard.”²⁸² To cure the fits of this sensible girl, Perfect first bled her then, upon no good effect, tried a laxative clyster with asafoetida. This more serious treatment got results: “she talked extravagant and incoherently, but soon became composed and rational.”²⁸³ Perfect reasoned that, as “the clyster had operated,” he would prescribe “a decoction of orange-peel, with a few chalybeate drops, twice a day; recommended her to change of air, moderate exercise, and cold-bathing, with a uniform and steady perseverance in the bitter infusion, and drops” with the hope of

²⁷⁸ Ibid., 74.

²⁷⁹ Perfect, *Cases of Insanity*, 74. This delicate sensibility and nervous quality appeared again in the treatment of another young adult female; as Perfect recalled: “I had the satisfaction to find the spasms appeased, and her nights uninterrupted; the stomach was invigorated, the digestion amended, the pulse cooled, and lowered to a natural uniformity of motion; her spirits were relieved, the swimming in her head was removed; and she has since enjoyed as good a state of health as she...ever can expect to do, with one, whose nervous frame is naturally so sensible delicate and irritable.” Ibid., 117.

²⁸⁰ Ibid., 2.

²⁸¹ Ibid., 77-8.

²⁸² Ibid.

²⁸³ Ibid., 79.

restoring her nerves from “a most debilitated state.”²⁸⁴ To Perfect’s satisfaction, “she had no return of the fits, but remained entirely well till...when she exchanged a single for a marriage state; and is now completely happy in an uninterrupted enjoyment of health, heightened by the endearing tenderness of a most amiable partner, and two children, the blooming pledges of connubial felicity.”²⁸⁵ This closing to the case not only affirmed Perfect’s good practice, but intimated the therapeutic power of entering a marriage state/bed.²⁸⁶

The kind of individual medical writers typically described as prone to or suffering from sexual maladies, like gonorrhoea, correlated to those Perfect described in his case studies of nervous disease. In particular, those individuals susceptible to nervous disorders and symptoms were consistently represented as young adults. For example, one case involved “a young Man, of about twenty, in a low and related state, with a constitution seemingly pre-disposed to nervous symptoms,”²⁸⁷ and yet another involved “a young lady, of naturally too great a sensibility of the nervous system.”²⁸⁸ These individuals were from well-to-do families, educated, and socially active. For males, the archetype was a young gentleman who was liberal in lifestyle and feeling. “The subject of the following cure,” Perfect began, “a young gentleman of fortune, education, quick and lively feelings, and of the most liberal sentiments, became unhappily attached to the too common and prevalent fashion of *morning drinking*, by which pernicious practice, he hurried himself into an inflammatory fever, which had nearly cost him his life.”²⁸⁹ As the young gentleman’s case instanced, the loose living was often the cause of mental illness through immoderate and harmful effects on the animal spirits. Sexual liberality or excess only compounded the unhealthiness of these lifestyles of the young and privileged.

But it was not only loose living that instigated nervous diseases; mental exertions also exhausted the spirits. In case XXXIII, Perfect described restoring “a most worthy and valuable member of society” to “his rational faculties.”²⁹⁰ This thirty-nine year old male “had long applied to intense study, and rigidly denied himself those relaxations, which a mind like his so greatly stood in need of, as a temporary relief and refreshment from the immoderate fatigue of intellectual researches.”²⁹¹ His symptoms were characteristic of melancholy: “flatulence of the abdomen, tension in the left hypochondrium, indigestion of

²⁸⁴ Ibid., 80-1.

²⁸⁵ Ibid.

²⁸⁶ This regimen is similar to Evelina’s treatment for her case of low spirits, which remedy included visiting the Bristol baths and, with more effect, getting married.

²⁸⁷ Ibid., 133.

²⁸⁸ Ibid., 147.

²⁸⁹ Ibid., 161.

²⁹⁰ Ibid., 209.

²⁹¹ Ibid., 209-10.

aliments, inquietude, anxiety, watchfulness, pain in the spine of the back, and a universal lassitude of the whole body.”²⁹² He gained temporary relief after seeking medical advice and receiving bleeding and an emetic; however, these symptoms returned with “redoubled violence,” leaving him in a delirium.²⁹³ Such patient profiles resemble Hill’s depiction of hypochondriacs as those with “greatness of mind, and steady virtue; determined resolution, and manly firmness, when put in action, and intent upon their object, all also lead to it.”²⁹⁴ Hill had similarly reasoned that “fatigue of mind, and great exertion of its powers often give birth to this disease; and always tend to increase it. The finer spirits are wasted by the labour of the brain.”²⁹⁵ Those who boasted thoughtfulness, resolution, and sensibility could expect to suffer nervous illnesses. Although Hill’s hypochondriac appears more virtuous and studious, the class, behaviours, and physiological bearing are consistent with those in Perfect’s cases. Both authors understood that certain kinds of people and behaviours were more prone to impairing the animal spirits, thereby causing hypochondria or hysteria.

Resonant throughout these pathology reports and descriptions is a connection between imbalances caused by reproductive organs and those affecting the mind. One young woman complained that just “prior to her next monthly menstruation, she was faint, drowsy, and low.”²⁹⁶ There was another “who from an obstruction of the menstrual discharge, was afflicted with lowness of spirits, violent tremor, hysterical suffocation, wandering, confused thoughts and ideas, giddiness, pains in the head and stomach, loss of appetite, spasms, watchfulness, palpation, and diminished perspiration.”²⁹⁷ Menstrual irregularity was both a sign and cause of nervous and mental illness.²⁹⁸ For instance, another young female was, “from an irregular flux of the menses, subject to hysteric fits, which at length degenerated into raving madness; in consequence whereof her words and actions from decent and rational, became wild and extravagant.”²⁹⁹ She experienced more behavioural symptoms, including “immoderate laughter in quick transition often followed involuntary crying, to which screams, yells, and horrid ravings often succeeded.”³⁰⁰ Once she came under Perfect’s care in June, 1779, he “began the cure with an antimonial emetic, in the operation of which, she ejected a worm of that species called the TÆNIA,” which Perfect observed is more commonly known as a tape worm.³⁰¹ He continued to treat her with “five grains of calomel,

²⁹² Ibid., 210.

²⁹³ Ibid., 211.

²⁹⁴ Hill, *Hypochondriasis*, 6.

²⁹⁵ Ibid.

²⁹⁶ Perfect, *Cases of Insanity*, 178.

²⁹⁷ Ibid., 193.

²⁹⁸ Ibid., 201.

²⁹⁹ Ibid., 205.

³⁰⁰ Ibid.

³⁰¹ Ibid.

and fifteen of rhubarb” and he noted “she had not menstruated for more than three months before her coming to me, and the first reappearance of that salutary secretion was observed in a small quantity, on the 26th of June, and on the 24th of July following, it returned in a copious manner; in a few days after which, she recovered her full mental powers.”³⁰² Rather than assign the cause of the disease to the tape worm, Perfect wholly blamed the suppressed menses. Although not as pronounced as it once was, the idea that wombs caused hysteric and involuntary behaviour in women lingered on. Certainly, the connection between mental illness and reproductive/sexual problems was still current in the last quarter of the century.

Reading Sexual Disease

But, gonorrhoea left characteristic marks and signs, making that secret disease readable to the knowing and perceptive. It is this readability that enabled eighteenth-century authors and readers of polite genres to imply and infer the most common bad consequences following the sexual intrigues of characters. As the literary examples in the preceding section show and literary historians now frequently discuss, there were many pathologies read between the lines or on characters’ imagined bodies in sentimental novels. Scholars have frequently pointed to the early modern tradition of spots that signalled the pox,³⁰³ but none have detailed the telling marks of gonorrhoea. In domestic situations, the most tell-tale sign that someone had gonorrhoea was stained sheets or cloths. However, what made venereal runnings a truly readable condition was the signs of consumptions or *tabes dorsalis* that accompanied the loss of animal spirits. These visible marks, called “Pathognomonick Signs,” can be added to those that scholars have already noted as key eighteenth-century indications of venereal disease.³⁰⁴ As Philip K. Wilson observes, “Most authors, however, directed readers to watch for the pathognomonical signs of infection, yet cautioned them that these signs might not appear all at once or even at all on every one who became infected.”³⁰⁵ When these signs did show, they appeared the same as those distinct, unfortunate, yet admired marks of sensibility. The wasting away of nerves or faltering store of spirits left sufferers teetering on the edge of nervous disease, looking wan, weak, lean, and absent. Medical literature described infirmed males as effeminate, similar to those who were

³⁰² Ibid., 206-7.

³⁰³ See Jonathan Gil Harris, “(Po)X Marks the Spot: How to ‘Read’ ‘Early Modern’ ‘Syphilis’ in *The Three Ladies of London*,” in *Sins of the Flesh: Responding to Sexual Disease in Early Modern Europe*, ed. Kevin Siena (Toronto: Centre for Reformation and Renaissance Studies): 109-132.

³⁰⁴ For discussions of pathognomonical signs, see Cockburn, *Symptoms, Nature, Cause, and Cure*, 96; Morton, *Phthisiologia*, 4.

³⁰⁵ Philip K. Wilson, “Exposing the Secret Disease: Recognizing and Treating Syphilis in Daniel Turner’s London,” in *Secret Malady*, 70.

exceptionally sensible.³⁰⁶ Just as sensibility was described using a specific register of literary imagery, so too was gonorrhoea—that related condition of the animal spirits.

The first pathognomical signs for a gleet, suggested Morton's treatise on consumptions, were "a Decrease of the Patient's Strength, and a Loss of Appetite."³⁰⁷ This wasting from a "Nervous *Atrophy*, or Consumption" perpetuated further symptoms that revealed the "distemper'd State of the Brain and Nerves."³⁰⁸ Nervous consumptions that Morton described were similar to those brought on by a gleet: "A Nervous *Atrophy*, or Consumption is that, which owes its Original to an ill and morbid State of the Spirits, and to the Weakness, or Destruction of the Tone of the Nerves; from whence, as an Imbecillity."³⁰⁹ Cam gave a more detailed explanation of the constitutional debilitation: "When the Venom has deserted the *Genitalia*, it creeps gradually and insensibly into our Vessels, and then corrupts all our Juices, and changes them into *Caustical ones*; and as the Blood soon corrupts the Sprits, so bad Blood soon hurries on bad Spirits; therefore when the Blood is tainted, Crowds of Diseases attend a Patient thus unfortunate, and they every Day more than other begin to look Pale and grow Lean."³¹⁰ Similarly, Marten gave symptoms of a running as "weariness of the Limbs, weakness, inability to move, a pale Countenance, hollow Eyes, Inappetency, trembling, and tendency to a Consumption."³¹¹ For instance, a gleet was described to have "reached its acmé" when "the complexion fades, and the eyes lose their brightness."³¹²

Men were especially susceptible to showing the signs of a gleet. This greater disclosure in the appearance of ailing males was because the loss of spirits brought on effeminacy:

But if young men suffer from the disease, their whole habit is changed and they feel the consequences of age, a resolution of the nervous system takes place, the patients are sluggish, lifeless, torpid, dull, weak, curved, inactive, pale, white, effeminate, have an aversion to food and are frigid, a heaviness of the members of the body, with numbness of the legs, takes place, they are remiss and languid in all their actions: this disease frequently lays the foundation of *paralysis* or a resolution of the whole nervous system, for how

³⁰⁶ See G. J. Barker-Benfield, *The Culture of Sensibility: Sex and Society in Eighteenth-Century Britain* (Chicago: University of Chicago Press, 1992), 104. Barker-Benfield also describes the portrayals of sensible males as effeminate.

³⁰⁷ Morton, *Phthisiologia*, 5.

³⁰⁸ *Ibid.*, 4, 5.

³⁰⁹ *Ibid.*, 2.

³¹⁰ Cam, *Rational and Useful Account*, 19-20.

³¹¹ Marten, *Degrees and Symptoms*, 394.

³¹² Armstrong, *Virulent Gonorrhoea*, 7.

can it be that the nervous energy should not suffer, when nature so powerful in generating life is rendered frigid and cold?

The reason for this effeminacy was that “Seed from its vivifying quality makes us men, and imparts heat, agility, activity, roughness, a manly voice, and courage, it likewise renders us fit to perform all the operations both of mind and body, a proof of which men themselves exhibit.”³¹³ This explanation suggests “nervous energy” was essential to manliness, and masculine appearance. Gleets sapped the healthy, ruddy looks of men, simultaneously aging and effeminizing.³¹⁴ This prognosis for gonorrhoea complicates how acquiring venereal disease related to masculinity in the eighteenth century.³¹⁵ Not only were men enfeebled, but so too were their sperm and offspring. If the seed is affected, Garlick averred, then “the Animalcula are more feeble and weak, and consequently Children born in such Circumstances, where the very *Stamina Vita* are faulty, must become weak and morbid.”³¹⁶ Such weak progeny were the lasting legacy of lost masculinity. These reproductive consequences were on the same scale as the infertility that other sufferers of gonorrhoea experienced.

Gleets’ symptoms and pathognomical signs were shared with other conditions that similarly plagued the nerves and decreased the animal spirits—masturbation, nocturnal pollutions, and too much sex. Such a connection between these varied ways of losing seed and spirits is evident in one of Smyth’s chapter titles, “Brief Observations on Gleets, Seminal Weaknesses, the Cause of Impotency, and the miserable Complaints occasioned by that detestable Vice, Self-pollution; or too early and excessive Venery.”³¹⁷ Revealingly, Smyth began that chapter with a quote from Cicero: “Nihil est malum, nisi quod turpe aut vitiosum est”—“Not any thing is bad, but what tends to corrupt or injure the mind.”³¹⁸ These sexual problems that Smyth addressed were most significant for the mental corruptions and

³¹³ Aretæus, *Aretæus*, 225-6.

³¹⁴ For discussion on the aging effect of gonorrhoea, see Marten, *Degrees and Symptoms*, 403. These concerns were also voiced in discussions about onanism: “they who are destitute of vital Seed, are wrinkled, pale, weak, of a shill voice, without hair, beardless and effeminate; such are, eunuchs.” *Short Treatise on Onanism*, 16.

³¹⁵ Siena conjectures that a “new masculinity” significantly contributed to the spread of venereal disease in the eighteenth century. Kevin Siena, “‘The Venereal Disease,’ 1500-1800,” in *The Routledge History of Sex and the Body, 1500 to the Present*, ed. Sarah Toulalan and Kate Fisher (Oxford: Routledge, 2013), 473. For discussion of venereal disease and masculinity in domestic situations in eighteenth-century France, see Robert Weston, “Men Controlling Bodies: Medical Consultation by Letter in France, 1680-1780,” in *Governing Masculinities in the Early Modern Period: Regulating Selves and Others*, ed. Susan Broomhall and Jacqueline Van Gent (Farnham: Ashgate, 2011), 240-43.

³¹⁶ Garlick, *Mechanical Account*, 3.

³¹⁷ Smyth, *New Treatise*, 46.

³¹⁸ *Ibid.*

injuries they produced.³¹⁹ Injury following masturbation was not specific to males; according to Smyth, “masturbation is followed in the weaker sex by consequences still worse than those already enumerated.”³²⁰ As Smyth’s treatise progressed through various editions, it became more about anti-masturbation and took on a more sensational and censorious tone. This progression led to his extensive pathological description and condemnation of female masturbation, “symptoms, both of body and mind, take place in women as well as in men, but there are some peculiar to the former, and the disease in general seems to proceed with greater rapidity in the female than in the male constitution.”³²¹ In particular, he described sterility and a loss of beauty: “They fall away, their plumpness and complexion forsake them, their skin becomes rough, the eyes lose their lustre, the lips their vermilion, the teeth their whiteness and the breath its perfume. The shape is generally destroyed along with the face.”³²² The graver consequences of masturbating females included “hysterics and vapours of more than ordinary obstinacy, incurable jaundice, violent cramps of the stomach and back, acute pains of the nose, *fluor albus* in an extraordinary degree, and of a quality extraordinarily sharp, and corroding so as to keep up continual soreness and pain; prolapses and ulceration of the matrix; prolongations and tetterous affections of the *clitoris*, barrenness...the last and worst of all those calamities to which nature has subjected the female sex, *furor uterinus*.”³²³ In addition to these fearful consequences, female masturbation “generally exerts its fatal influence at an earlier period, it may be easily conceived to be abundantly equal to the production of deformity of every kind.”³²⁴

Some of these symptoms had also been proposed by Marten, who suggested that just as a gleet causes “*Infæcundity* and *Sterility*” so does “too liberal using *Friction* with the Hand when they were School-Boys” and “too much *Venery*.”³²⁵ Likewise, Falck reiterated the notion that an “excess of venery causes sterility both in men and women,” as demonstrated by prostitutes not bearing children.³²⁶ Marten supported this idea, claiming that “immoderate desire of *Carnal Conjunction*, is a Disease, and notwithstanding the Mind is to strongly enclin’d to *Venery*, such seldom do Conceive with Child.”³²⁷ All of these spirit-draining experiences led to the nervous disorder of “a *Dorsal Tabes* or Consumption

³¹⁹ Ibid. Smyth ensured he erred on the side of caution by adding the following comment: “The above quotation, I flatter myself will sufficiently authorize, or at least take off any imputation of indecency for my offering to public view an essay on the above subject” (ibid.).

³²⁰ Ibid., 32.

³²¹ Ibid.

³²² Ibid.

³²³ Ibid., 33.

³²⁴ Ibid.

³²⁵ Marten, *Degrees and Symptoms*, 393.

³²⁶ Falck, *Venereal Disease*, 85.

³²⁷ Marten, *Degrees and Symptoms*, 424.

of the Back, by the too frequent and too plentiful profusion of *Seed*, which hurts the Spinal Marrow contain'd in the *Vertebrae* of the Back."³²⁸ Likewise, Bree asserted that impotence is "sometimes the consequence of free living, it is very frequently occasioned by long continued gleans, or ill cured Gonorrhoeas; but the most general cause of it is that pernicious habit which is too often prevalent among school-boys, and to which much future misery is the unavoidable punishment."³²⁹ And, not only men suffered these ill effects of immoderate emissions; certain runnings in women were thought to be a loss of "Nervous Juice; which if were so, an incurable Consumption and withering of the whole Body, and a siccidity of the Nerves must necessarily in a very short time ensue."³³⁰ Both males and females may "breed abundance of hot *Seed*, which often provokes to Excretion in a pleasant Dream." If this is excessive, it "does pine away the Body to a Consumption."³³¹

Concern over the terrible effects of losing seed was medical doctrine by the mid-eighteenth century. That pathological theory correlated to the anxieties about venereal disease, ideas about domestic politics, and discussions about libertinism, which topics especially surfaced in discussions about onanism. As described in *A Short Treatise on Onanism* (1767), "*Semen* is, as it is were, the flower and choicest part of the blood and nervous fluid, so venery ought to be only moderately used."³³² Accordingly, the author warned that masturbation was an "abominable and unmanly practice... productive of the most deplorable, and generally incurable disorders."³³³ Years later when discussing how masturbation was "so dreadfully destructive in its effects," Bree related "that the world were astonished when the late Mr. Hunter seemed to disregard its danger, and to palliate its evil tendency."³³⁴ Unlike Hunter, most medical authors on the topic vented anxieties over "the unthinking youth who enervates himself by this habit, not only draws his attention from a superior pleasure, but inevitably brings upon himself years of repentance, if not absolutely a shortening of existence."³³⁵ Before death encroached on those enervated by a loss of seed and spirits, mental disease often overtook them. "For these lawless Pleasures not only impair the Constitution of Body," explained Robinson, "but greatly weaken and enervate the noblest Faculties of the Soul, whereby the whole Man is frequently brought to crouch under the Weight of these melancholy Circumstances."³³⁶ Enervation and melancholy following inordinate sexual behaviours, however, was not a private malady as the appearance of

³²⁸ *Ibid.*, 398.

³²⁹ Bree, *Observations Upon the Venereal Disease*, 48.

³³⁰ Marten, *Degrees and Symptoms*, 405.

³³¹ *Ibid.*, 385.

³³² *Short Treatise on Onanism*, 17.

³³³ *Ibid.*, 12.

³³⁴ Bree, *Observations Upon the Venereal Disease*, 51.

³³⁵ *Ibid.*

³³⁶ Robinson, *New Treatise*, preface, ix.

sufferers was widely known. Masturbation, like gonorrhoea, was not merely a private plight, it was a public problem.

Discussions of the private miseries and social consequences of disorders caused by low spirits frequently appeared in sentimental novels. One of the most dramatic melancholics in that genre was Mr. Macaulay in Frances Burney's *Evelina*. This character had sunk so deep into mental darkness as to bring him to the verge of suicide. He was poetic, thoughtful, often reading, and spoke with few words and many expressive looks and gestures: he was a man of sensibility. Further, he had a complicated sexual past: a Parisian love affair with a girl he later discovers to be his sister, and then discovers not to be his sister. Sex was not explicitly mentioned nor was any disease, but his wan pallor, wasted appearance, and irrational behaviour suggest the symptoms of that all-too-common illness. The cure for Mr. Macaulay, and others suffering from nervous disorders in the novel, was similar to the prescribed remedies given by medical writers like Perfect. Mr. Macaulay's symptoms of melancholy are resolved upon his entering a happy marriage, which stabilizes his romantic and nervous troubles.

Characters, whether male or female, could be easily indisposed by sexual disorders caused by their behaviours, bodies, environments, thoughts, or feelings. These disorders were manifest in their sensible features, which insightful readers could interpret. Among the various penile infirmities alluded to in Laurence Sterne's *Tristram Shandy*, venereal disease is not mentioned explicitly. However, Walter Shandy's "sciatica," which prevented him from fulfilling his marital duties, is one possible instance. Yorick too possibly experienced the venereal blight. Such a speculation is not entirely unfounded: Yorick was a great romancer, traveler, and hypochondriac. Moreover, Sterne's portrayal of Yorick was notably autobiographical. The health-wary Yorick reflected Sterne's own anxieties about his lingering, and ultimately fatal, consumption. As revealed in his *Memoirs*, Sterne was diagnosed with and treated for a venereal infection during the same period he wrote *A Sentimental Journey*.³³⁷ Anxieties about sexual disorders and treatments, in relation to nervous bodies and sensitive minds, are present throughout both of his major works of sensibility.

Fictional narratives and medical case studies similarly offered evocative accounts of nervous disorders that correlated to sexual complications. Sentimental novels frequently alluded to sexual and reproductive diseases, like gonorrhoea. While medical narratives about nervous and sexual disorders often adopted a sentimental tone and style. For example, Jean-Paul Marat's treatise on the gleans begins with a personal account: "Calling one morning on an intimate friend of mine at *Paris*, I found him involved in the deepest melancholy." The

³³⁷ Laurence Sterne, *Sterne's Memoirs: A Hitherto Unrecorded Holograph Now Brought to Light in Facsimile*, intro. and com. Kenneth Monkman (Leeds: Smith Settle, 1985).

friend was plagued with a stubborn gleet and was “on the point of marriage with a young lady of fortune whom he loved.” Marat recounted that for the melancholy to be cured, the gleet must be cured, which he effectively managed.³³⁸ Both medical and non-medical authors offered specific visual descriptions. For those who luckily recovered from their gonorrhoea or gleet the visible signs of that malady gradually receded: “the countenance, which was before pale, and wan, will again resume its florid, or natural hue.”³³⁹ Such signs were included in sentimental fiction to communicate to readers several connected possibilities and ideas about characters’ sexual experiences, nervous conditions, mental health, and, ultimately, their motivations.

Treating Gonorrhoea, Raising the Spirits

As Turner summarized, most treatments for gonorrhoea were designed for “strengthening the Blood in general, and invigorating the Nerves.”³⁴⁰ These cures took the form of diets,³⁴¹ injections, poultices, rubs, pills, drops, purges, blood-letting, enemas, cold bathing,³⁴² and various other kinds of regimens and therapies,³⁴³ even surgery.³⁴⁴ Wendy Churchill observes that in cases of venereal disease “the medical treatment provided to male and female patients who presented the same symptoms appear to have been similar or, at times, even identical,” although sex was still a primary consideration by many prescribing practitioners.³⁴⁵

Surveying medical texts and cure recipes shows that treatments for gonorrhoea generally affected the animal spirits, as either the target or a side-effect of treatment.

³³⁸ Jean-Paul Marat, *An Essay on Gleets...* (London: W. Nicoll and J. Williams, 1775), 6-7.

³³⁹ Armstrong, *Virulent Gonorrhoea*, 8.

³⁴⁰ Turner, *Discourse Concerning Gleets*, 7.

³⁴¹ For very specific dietary advice in this matter, see Robinson, *New Treatise*, 102-3.

³⁴² Marten, *Degrees and Symptoms*, 398.

³⁴³ For many of these kinds of remedies, see Armstrong, *Virulent Gonorrhoea*, 24-30.

³⁴⁴ When baths, medicines, and other non-invasive treatments failed then the surgeon’s knife came into consideration. This recourse was more common in definite syphilitic cases, but occasionally a gonorrhoea required such intervention. William Ellis related one such surgical case, wherein a fifty year-old gentleman sought medical help as he had all the symptoms of gonorrhoea. Having seen Ellis and received various treatments, including a purge and opiates, a surgeon named Mr. Sharp was called to assist. The gentleman’s scrotum had unexpectedly become “distended to the size of a child’s head.” Ellis, *Essay on the Cure*, 26-7. Prosthetics were also considered if a gonorrhoea patient was so debilitated. Syphilitics had fake noses at their disposal. See John Armstrong, *The Oeconomy of Love*, 5th ed. (Dublin, 1742), 10. Armstrong included a note for “Nice *Taliacotius*’ Art.” This phrase, according to the note, referred to “*Taliacotius*, Professor of Phisic and Surgery, at *Bononia*, wrote a Treatise on the Art of ingrafting Noses, Ears, &c. with proper Instruments and Bandages. Some *English* Surgeons and others have wrote in Favour of this Art.” “Lechers, whom Clap or Drink disable, / Might here have *Dildoes* to their Navel.” Samuel Butler, “*Dildoides*,” in *The Works of the Earls of Rochester, Roscomon, and Dorset: the Dukes of Devonshire, Buckinghamshire, &c.* (London, 1777), 2: 147.

³⁴⁵ Wendy D. Churchill, “The Medical Practice of the Sexed Body: Women, Men, and Disease in Britain, circa 1600-1740,” *Social History of Medicine* 18, no. 1 (2005), 7.

Importantly, therapies for gonorrhoea that affected animal spirits also affected passions, moods, and behaviour. Medical advertisements frequently mentioned animal spirits in their pathology or treatment descriptions in order to relate sexual disorder to more general illnesses, especially mental. Advertisements communicated ideas linking animal spirits, sexual disease, and nervous disorders to a general readership. These advertisements also ensured the medical ideas they incorporated circulated among the general public. Lawrence Stone rightly observed that advertisements for venereal disease cures abounded in eighteenth-century periodicals.³⁴⁶ More recently, P. S. Brown's comparative study of patent medicines advertised in mid-eighteenth-century Bath newspapers shows the enormous amount of print dedicated to such remedies.³⁴⁷ Vendors of these remedies included newspaper proprietors or printers, booksellers or stationers, perfumers, toy sellers, grocers, dentists, apothecaries, and chymists, and druggists.³⁴⁸ However, unlike periodical advertisements, medical treatises warned that the loss of animal spirits from a gleet could be extremely difficult to cure or recover from, especially if it was a chronic condition. "I have endeavour'd in vain to cure *Gleets* of 20 Years standing," disclosed Cam, "which I am now wiser than to attempt."³⁴⁹ Smyth met with similar frustration in treating gleets: "Of all the disorders that afflict the human body, not any, I affirm, has baffled the faculty in physic, more than what I now am treating of."³⁵⁰ Even after all else was cured, a gleet could continue indefinitely. To reassure his readers, Smyth professed his remedy to be "probably the greatest cordial to nature, the whole material medica can produce, and will even at the last ebb of life afford amazing assistance to the languid spirits."³⁵¹ Many other medics described the difficulty of returning "the animal œconomy as it were in its equilibrium"³⁵² following a noxious gleet,³⁵³ but fortifying depleted spirits was the goal of medical interventions in gonorrhoeas and gleets. On the contrary, treatment advertisers often bragged about their remedy's effectiveness—one even boasted that it "never fails acting with Safety, Secrecy and Ease, upon Man or

³⁴⁶ See Roy Porter, *Health For Sale: Quackery in England, 1660-1850* (Manchester: Manchester University Press, 1989), 173; Kevin Siena, *Venereal Disease, Hospitals, and the Urban Poor: London's "Foul Wards," 1600-1800* (Rochester: University of Rochester Press, 2004), 41-2.

³⁴⁷ Brown, "Vendors of Medicines," 351.

³⁴⁸ *Ibid.*, 357.

³⁴⁹ Cam, *Rational and Useful Account*, 7.

³⁵⁰ Smyth, *New Treatise*, 47. In his view, "a venereal gleet is an obstinate continuance of a running after all the symptoms of the infection are removed" (48).

³⁵¹ *Ibid.*, 67.

³⁵² Smyth, *New Treatise*, 65.

³⁵³ Bree also confessed that "notwithstanding the volumes which have been written on these complaints, it cannot be denied that the most eminent of the faculty occasionally fail in the treatment of them." Bree, *Observations Upon the Venereal Disease*, 3.

Woman, without Confinement or Alteration of Diet,” even if “you piss thro’ a Dozen Holes.”³⁵⁴

Advertisements about medical services and cures for venereal disease, gonorrhoea, and gleet often invoked similar narratives of progressing illness and personal ruin, although with a less moralizing tone. One typical advertisement from 1730 claimed to “Cure of SEMINAL and GENITAL Imbecilities” made by Dr. R. Nelson.³⁵⁵ The description relates how gleet is “the Bane of Virility in the one Sex, and Destroyer of Fertility in the other,” and can “wither, as it were, the Generative Faculties,” which leads to “weakly, sickly Offspring if any.”³⁵⁶ Like other medical descriptions, it suggests gleet leads to “in the long Run (by impoverishing the Blood and Spirits) Melancholly, Vapours, Decays of Nature and Consumptions.”³⁵⁷ Aside from its beneficial effects of “reviving and enriching the Blood and Spirits,” nothing is said of the ingredients of that elixir sold at Mr. Isted’s bookshop.³⁵⁸ Authors of these kinds of eighteenth-century advertisements referenced animal spirits as a show of their medical knowledge and authority. Mentioning animal spirits also heightened the seriousness of sexual diseases.

Yet, as Quézel suggested, treatments sometimes adversely contributed to the neurological symptoms, which were often attributed to the disease itself.³⁵⁹ In retrospect, Marten’s treatise provided some good, forward-thinking advice in cautioning against mercurial treatments. The action of mercury, he warned, was “*to break and destroy the Oeconomy of the Body, and the orderly connexion or derivation of the Humours, or to hinder or stop the progress of the Natural Course of the Spirits, is really a Poison, call it else by what fine Name you will.*”³⁶⁰ Many other medical authors agreed; Armstrong decried how the quacks heedlessly dispensed dangerous mercurials and how “the chymists have tortured mercury in a great variety of forms.”³⁶¹ The confusion of disease symptoms and medicinal side-effects underscored Bree’s observation that giving mercurial pills caused the patient to feel “languor, lowness of spirits, and occasionally a loss of appetite, or other

³⁵⁴ “The Specifick Injection or Lotion,” in “Advertisements,” from 16th October 1734, *Old Bailey Proceedings Online* (www.oldbaileyonline.org, version 6.0), ref. a17341016-1.

³⁵⁵ Advertisement in the “Ordinary’s Account,” from 23rd December 1730, *Old Bailey Proceedings Online*, (www.oldbaileyonline.org, version 6.0), ref. OA17301223.

³⁵⁶ *Ibid.*

³⁵⁷ *Ibid.*

³⁵⁸ *Ibid.*

³⁵⁹ Quézel, *History of Syphilis*, 86. “The symptoms of mercury poisoning (cutaneous eruptions, ulceration, neurological effects) were usually attributed to syphilis itself” (*ibid.*).

³⁶⁰ Marten, *Degrees and Symptoms*, preface, xxxvii.

³⁶¹ Armstrong, *Virulent Gonorrhoea*, 20, 31. Smyth noticed that “many unfortunate people have labored for years under the affliction of those pains, mistaking them for the rheumatism or gout, though on a strict enquiry found to be caused by the remains of an ill-cured pox, or the effects of mercurial.” Smyth, *New Treatise*, 24.

symptoms of relaxation;”³⁶² notably, those were the same symptoms as in melancholy. These cautious attitudes meant that many medical authors advised using mercury only once the venereal disease advanced beyond a gonorrhoea.³⁶³ When mercurial cures were prescribed, those “treatments for the pox were often more excruciating than the disease’s symptoms.”³⁶⁴ Most practitioners understood that mercury should be used only in such a case as Robinson described, when “the Cure has been neglected in the Beginning, it so happens that the pocky Virus is communicated to the superior Organs of the Habit; where it commits great Depredations, both upon the Blood, and animal Juices.”³⁶⁵ Ironically, mercury treatments often harmed those “superior Organs” they were intended to protect. A primary concern in designing and prescribing treatments was the fortifying and balancing of the animal spirit economy.

Therefore, the medicines promoted for the treatment of gonorrhoea, which were intended to raise the flagging levels of animal spirits, had adjunct effects on other problems with the organs of generation, the nerves, and the mind. An extensive range of other medicines for venereal disease existed, with many common ingredients.³⁶⁶ Robert Lovell’s seventeenth-century *Pambotanologia*, recommended that medicines for gonorrhoea should include comfrey, dragon tree, Egyptian thorn,³⁶⁷ fire tree, iris, frankincense, stinking iris, gromwell, harefoot mushrooms, holly, knotgrass, larch tree, mastic tree,³⁶⁸ liverwort, asplenium,³⁶⁹ and lily.³⁷⁰ Significantly, these remedies did not only treat gonorrhoea; they also treated such related maladies as melancholy, convulsions, obstructed courses, strangury,

³⁶² Bree, *Observations Upon the Venereal Disease*, 18. For opinions against mercury injections and ointments, see *ibid.*, 20, 29.

³⁶³ For John Hunter’s abidance to this rule, see Wendy Moore, “John Hunter: Learning from Natural Experiments, ‘Placebos’, and the State of Mind of a Patient in the 18th Century,” *Journal of the Royal Society for Medicine* 12 (2009), 395.

³⁶⁴ Allen, *Wages of Sin*, 51. As Quétel noted, some treatments for the pox were more bizarre and ludicrous than painful: “As for Torella, he advocates some very curious procedures; if the penis is ulcerated and infected (it is always the male sex for which the doctor feels pity, the woman being strictly confined to the role of contaminator, whose chancre, moreover, is difficult to discover), you must immediately wash it thoroughly with soft soap, or apply to it a cock or pigeon plucked and flayed alive, or else a live frog cut in two.” He observed that variations of this treatment continued from the sixteenth to eighteenth century. Quétel, *History of Syphilis*, 23.

³⁶⁵ Robinson, *New Treatise*, 94.

³⁶⁶ cf. David Gentilcore, “Charlatans, the Regulated Marketplace and the Treatment of Venereal Disease in Italy,” in Siena, *Sins of the Flesh*, 57-80.

³⁶⁷ Also known as gum arabic tree.

³⁶⁸ Robert Boyle also recommended this ingredient in curing gonorrhoea. See Robert Boyle, *Medicinal Experiments, or, a Collection of Choice and Safe Remedies for the Most Part Simple and Easily Prepared, Useful in Families, and Very Serviceable to Country People* (London, 1693), 93, 98.

³⁶⁹ The author refers to “milt-wast” in particular.

³⁷⁰ Robert Lovell, *Pambotanologia. Sive Enchiridion Botanicum. Or a Compleat Herball* (London, 1659), 124, 142, 146, 162, 163, 174, 187, 203, 206, 223, 251, 255, 273, 290, 301.

the whites, stones, and the French disease. Likewise, Adrian von Mynsicht's *Thesaurus & Armamentarium Medico-Chymicum* gave several recipes for gonorrhoea remedies. His "Aperitive Magistry of *Mars*" recipe cured melancholy, various menstrual disorders, greensickness, the whites, as well as "an inveterate Gonorrhoea."³⁷¹ His "Nitre Vitriolated" concoction cured "putrid Gonorrhoea, the White in Women, the Scurvy," and "the obstruction of the Terms," but also helped "they who are subject to Contraction and Convulsion of the Nerves, and those who have dry Brains, or lean, spare Bodies."³⁷² He also recommended his "Magistry of Coral with Roses," his "Powder compounded with Turpentine," a "Marmelade of Turpentine," a "purging Turpentine," "Syrup of red Coral," his "Chast Water," "Emulsion of Hemp seed," "Oyl of Woods," and a "Balsam of Turpentine" for gonorrhoea and other associated venereal disorders. In the mid-eighteenth century, Peter Canvane advocated the use of castor oil in treating women that become "languid and melancholy" after delivery and for those laboring under a gonorrhoea.³⁷³ Jesuits Bark was another common recommendation.³⁷⁴ More consistent than the ingredients of these recipes was the theoretical connection they reinforced between venereal, nervous, and mental problems.

Since medicines for sexual maladies affected both the mind and groin, giving the wrong medication for such maladies could have adverse mental side-effects. Smyth related two case studies to this effect; the first was about a young man who masturbated till impotent.³⁷⁵ He "purchased an empirical composition."³⁷⁶ This quack's remedy "totally debilitated him," caused him pain, and nearly took his life:

Having taken a dose, going to bed according to the directions given him, in about an hour after, he was seized with the most excruciating pain in the

³⁷¹ Adrian von Mynsicht, *Thesaurus & Armamentarium Medico-Chymicum, or, a Treasury of Physick with the Most Secret Way of Preparing Remedies Against All Diseases* (London, 1682), 24-5.

³⁷² *Ibid.*, 29-30.

³⁷³ Peter Canvane, *A Dissertation on the Oleum Palmae Christi, Sive Oluem Ricini; or, (as it is Commonly Call'd) Castor Oil* (London, 1766), 80-1.

³⁷⁴ Mynsicht, *Thesaurus & Armamentarium*, 38, 99, 167, 194, 198, 239, 260, 338, and 346. This market for remedies also included some designed to be made at home and on a modest budget. Another author recommended a jelly made of rose water, "Gum-Dragon" (i.e. tragacanth), nutmeg, and sugar, which remedy supposedly "corroborate and strengthen all the weaken'd Seed Vessels, and take away intirely the Gleet, and is so pleasant and pretty a Thing to take, and so cheap and easie to make, that no Person can find any Fault with it"—unless it did not work. *Full and Plain Narrative*, 12. Peruvian Bark, otherwise known as Jesuit's Bark and a source of quinine, also provided some hope of a cure for venereal disease. Morton, for instance, recommended Peruvian Bark to be used to treat obstinate cases. , *Phthisiologia*, 18. However, some were not so hopeful and warned of the over common use of "the Bark." See Thomas Bayford, *The Effects of Injections into the Urethra* (London, 1773), 9.

³⁷⁵ Smyth, *New Treatise*, 55.

³⁷⁶ *Ibid.*, 57.

genital parts, attended with a violent priapism. Though great the pain, he bore it with uncommon patience, for by the strength of the erection, he flattered himself he could perform wonders, which prompted him to attempt, by an immensity of furious efforts, by that means he almost killed himself, as well as his female partner.³⁷⁷

After this close encounter with death-by-sex, he fell into a delirium and again nearly died as “the animal spirits being quite exhausted by a frequent discharge of bloody urine, &c.”³⁷⁸

After this delirium, not only did his genital symptoms remain, but his sight was “greatly impaired, insomuch that he could neither read nor write, but tears issued from his eyes, attended with a pain over the eye-brows.”³⁷⁹ Luckily, he recovered by the help of Smyth’s “stimulating medicines,” although “he has ever since sustained a great loss of memory.”³⁸⁰ Smyth concluded this account by warning of the dangers of quack remedies that “excite a lustful desire.”³⁸¹

Cold bathing also improved the animal spirits, seed quality, and mental health. The well-known advocate of that practice, Sir John Floyer, suggested that washing the head with cold water “cools the Brain...renders it fitter for all Rational Thoughts, and the Animal Spirits being compressed, are more lively, springy, and fitter for Motion.”³⁸² Floyer also affirmed that this therapeutic effect on the animal spirits helped ameliorate nervous disorders, like hypochondria and hysteria, and the loins.³⁸³ Sintelaer suggested that such baths counteracted the “*Impotency and Frigidity*, occasion’d by the Loss of the *Genital Liquor*” because the coldness “reinvigorates our Spirits, by checking their too violent Agitation or Motion.”³⁸⁴ An earlier advocate of bathing, specifically in Astrop’s Well, Richard Lower enthusiastically claimed that “it opens the Obstructions of the Liver and Spleen, cures the *Flatus hypochondriacus*, and the Palpitation and Trembling of the Heart proceeding from thence.”³⁸⁵ He continued listing what those miracle waters cured, including scurvy, loose teeth, aches, cramps, agues, jaundice, dropsy, green-sickness, and kidney stones.³⁸⁶ In women, taking the waters would open “all Obstructions, and suppresseth all

³⁷⁷ Ibid.

³⁷⁸ Ibid., 58.

³⁷⁹ Ibid.

³⁸⁰ Ibid., 59.

³⁸¹ Ibid., 60.

³⁸² John Floyer, *Psychrolousia; or, the History of Cold Bathing: Both Ancient and Modern...*, 2nd ed. (London: printed for Sam. Smith and Benj. Walford, 1706), 98.

³⁸³ Ibid., 137, 24. Floyer described a similar effect of cold bathing on “the Brain, Nerves, Back-marrow, the Breasts, Loins, Stomach, and Hypochondria’s, and the Flesh” (24).

³⁸⁴ Sintelaer, *Scourge of Venus and Mercury*, 142.

³⁸⁵ Richard Lower, *A Brief Account of the Virtues of the Famous Well of Astrop, not far from Oxford, of Late so much Frequented by the Nobility and Gentry* (London, 1668), 3-4.

³⁸⁶ Ibid.

Overflowings in Women, strengthens the Womb, and is a great help to Conception, and preventative against Miscarrying: it cures the Mother, and Precipitation of the Matrix, and falling down of the Fundament.”³⁸⁷ Relating specifically to sexual disease, he commended how such baths healed “Strangury, and difficulty of making water, and the involuntary passing away of the water, the pissing of Bloud, and the Gonorrhoea.”³⁸⁸ However, other wells besides Astrop became centers for curing gonorrhoea. The poem “On a Silly Talkative Lady at the Hot Well at Bristol” begins:

Fam’d Stream! by whose retentive Force we’re taught
Such various, and such wond’rous Cures are wrought,
Stop but the Gleet in *Saccharissa*’s Tongue,
The Praises shall by *Phæbus* self be sung;
Admire not, Reader, that I call it so,
Since great the *Running*, and from *Weakness* too.³⁸⁹

These fashionable resorts for health were where the culture of sensibility thrived among the bon ton, which relationship is exemplified by such figures as George Cheyne, who resided in Bath and drew the attentions of nerve patients and socialites alike.³⁹⁰ These resorts were also seen as supporting a high proportion of rakes mending from and healers specializing in venereal disorders.³⁹¹

Yet, once a gleet was cured the patient was never entirely out of the woods. Gleets easily returned if the animal spirits were disrupted, especially by desire and arousal. Edward Thompson’s poem *The Meretriciad*, which told of a prostitute named Poll, warned of chronic or recurrent gleets:

Tho’ thou art living, yet they’re obsolete,
If ought perpetuates, it’s some endless gleet:
You had your hot, nay and your *Cold-Well* too,
And he that dabbl’d did his dabble rue;³⁹²

A recovering patient, like Poll, must moderate their “Passions, and check their exorbitant Sallie” or the gleet will return.³⁹³ As Robinson advised for men, “Be very careful, not to hold amorous Discourses with light, wanton Girls; nor read lascivious Books, nor indulge himself

³⁸⁷ Ibid.

³⁸⁸ Ibid.

³⁸⁹ *Joe Miller’s Jest: or, the Wits Vade-Mecum*, 6th ed. (London, 1743), 212-3.

³⁹⁰ For the relationship between the growth of spa resorts and nervous disorders within fashionable circles, see Barker-Benfield, *Culture of Sensibility*, 15.

³⁹¹ Frances Burney depicted the spa destinations at Bristol as drawing rakish types in *Evelina*.

³⁹² Edward Thompson, *The Meretriciad* (London, 1761), 35.

³⁹³ Robinson, *New Treatise*, 106-7.

in any vicious Objects, or lustful Pictures, that may raise his venereal Appetite.”³⁹⁴ The apprehension about printed materials reflects how books and illustrations were regarded as liable for arousing the fancy, corrupting the mind, and spurring sexual behaviour. Boerhaave had given a similar caution to those with gleans: “Whatsoever therefore sets the Imagination to Work, whether it be Meat, Drink or Medicine, or Conversation with the amiable Sex, or Pictures, or Stories, or Reading; should be avoided as Things which will most probably produce the worst Consequences.”³⁹⁵ This medical preoccupation with the stimulation of the senses and the imagination participated in the profound anxieties about Georgian amusements, products, and modish activities.

But not only print could cause trouble; sound too could lead those on the mend back into a gleet. “I heard a Gentleman declare, that his Gleet returned upon him again, at a Concert of Musick,” reported Robinson wryly, “but whether this was owing to his indulging a wanton Imagination, upon the beautiful Objects then present; or to the Force of musical Sounds, which have great Influence, as well upon the Organs of the Body, as the Faculties of the Mind, I will not take upon me to determine.” Even though Robinson would not speculate as to the exact relationship between the music and the returning gleet, he assumed that *sensual* things affected the mind and genitalia and he reinforced the idea that high society was more exposed to those fine sensations that could incite gleans. Any passion of the mind that moved the spirits could prompt an old gleet to run: “I am certain, that excessive Joy, as well as excessive Anger, will be a means of increasing the Discharge of the virulent Gleet.”³⁹⁶ Even if an inflamed imagination did not lead to a recurrent gleet, it could easily lead to nocturnal pollutions, which produced the same hurtful physiological effects. As Morgagni reported, “we see into what an emaciate state, and dejection of strength, they fall, who discharge the semen, in consequence of lascivious dreams, very often, and for a long time together.”³⁹⁷ To prevent such cases, desperate—albeit inventive—measures were taken:

Some of these person I have known, who having receiv’d no advantage from remedies, and fearing lest they should be hurried into a fatal atrophy, determin’d, by a kind of happy thought, to tie the penis round about with a band of soft leather, under the very margin of the corona glandis; so that as long as penis did not become rigid, they should feel no inconvenience from it; but when it began to grow rigid, that it should immediately create an

³⁹⁴ Ibid.

³⁹⁵ Boerhaave, *Treatise on the Venereal Disease*, 57-8.

³⁹⁶ Robinson, *New Treatise*, 107.

³⁹⁷ Morgagni, *Seats and Causes*, 2: 607.

uneasiness, and the danger of emitting the semen be remov'd, by being rous'd from their sleep.³⁹⁸

Nocturnal emissions, gleans, and gonorrhoeas were similarly alarming disorders, because they all caused a significant loss of animal spirits. But leather penis collars were not the only device contrived to prevent or remedy involuntary emissions.

A therapeutic fashion that reached its height in the mid-eighteenth century was injections for gonorrhoeas and gleans. Although medicinal injections for venereal disease were tried as early as the mid-sixteenth century by Antonio Musa Brasavola,³⁹⁹ this form of treatment did not become widely used until the late seventeenth century. Acceptance of that treatment followed a growing use injections in experiments on and preparations of genitalia.⁴⁰⁰ Yet, many practitioners resisted this use of injections as treatment. Cam declared that “a Person may be freed of a *Gonorrhœa* with the Use of pompous Injections, and yet be under a Necessity of undergoing a severe Salivation to cure him of a Pox in less than half a Year.”⁴⁰¹ Other critics of these fashionable medical devices denounced them as absolutely ineffective cures.⁴⁰² Whether such injections improved gleans remained a point of debate for the next five decades. In 1773, William Cribb published *Considerations on the Use of Injections in the Gonorrhœa* and Thomas Bayford *The Effects of Injections into the Urethra*. Cribb claimed to be the first to give “a general view of the use of injections” for treating venereal disease,⁴⁰³ and both authors considered what “has been said, both for and against the use of injections in the cure of the virulent *Gonorrhœa*.”⁴⁰⁴ In his condemnation of injections,⁴⁰⁵ Bayford observed that it was “a time when the use of injections is so much in vogue,”⁴⁰⁶ and there was a “very extravagant use of such medicines in this kingdom.”⁴⁰⁷

³⁹⁸ Ibid.

³⁹⁹ William Cribb, *Considerations on the Use of Injections in the Gonorrhœa* (London, 1773), 19. For the use of injections in remedies, see Johnson, *Enchiridion Medicum*, 287. For an advertisement of a special injection treatment, see An Eminent Surgeon in London, *A Gonorrhœa, and the Effects of the Application of Venereal Matter*, 15.

⁴⁰⁰ See chapter two.

⁴⁰¹ Cam, *Rational and Useful Account*, 44. Injections, according to Cam, are only “useful in the first Moments of the Infection” (45).

⁴⁰² *The Quack's Miscellany: in Prose and Verse* (London, 1732), 59. As the anonymous author advised, “In the *Daily Journal of Monday, July 27. 1730.* you may find an Advertisement published: wherein the Doctor gives publick Notice, that at such and such particular Places he is to be advised with on particular Days; and cures without one Grain of Physic taken inwardly, by an Injection a simple *Gonorrhœa*.”

⁴⁰³ Cribb, *Considerations*, 1.

⁴⁰⁴ Bayford, *Effects of Injections*, 2. Bayford writes against the use of injections.

⁴⁰⁵ The royal surgeon and physician, de Blégnny, and Cockburn were the principle supporters for injections while Astruc and Turner spoke against them. See Cribb, *Considerations*, 2. Bayford listed Daran as also being against injection. See Bayford, *Effects of Injections*, 74.

⁴⁰⁶ Bayford, *Effects of Injections*, 9. For instance, Benjamin Martin's widely advertised cure for gonorrhœa instructed how using his serum “INJECTIONS are made, in the like manner, of a liquid Form.” Benjamin Martin, *Bibliotheca Technologica* (London, 1737), 510.

More than just being ineffective, critics claimed injections could seriously irritate the urinary passage,⁴⁰⁸ or cause impotency.⁴⁰⁹

A decade later, the surgeon Peter Clare expressed a more ambivalent attitude toward injections. Clare had “long declined using injections” but was then convinced by others of their utility.⁴¹⁰ He found injections of medication two or three times daily to effectively relieve symptoms.⁴¹¹ Bree recommended that injections for women to be “double the strength of those for men, and should be applied at least seven or eight times in the day.”⁴¹² He not only advised on injection regimen, but also on injection tools: “The best syringes for either men or women, are those composed of elastic gum, and of these the points of the tubes should be blunt,”⁴¹³ Bree’s patients surely appreciated such attention to detail. Significantly, Clare observed that “long continued purging is apt to weaken the stomach and intestines, to hurt the digestion, to produce obstinate gleans, and leave hypochondriacal symptoms, particularly in irritable or melancholic habits.”⁴¹⁴ Treating gonorrhoea in individuals with nervous vulnerabilities was more likely to induce weighty psychological side effects.

Syringes were not the only treatment device to be inserted into urinary canals; bougies also became a common recourse in curing gonorrhoeas and gleans.⁴¹⁵ Bougies, thin rods usually made of metal or wax, were often lubricated, sometimes covered in medication, and inserted into the urethra. Marat’s 1775 treatise on the gleans strongly advocated the use of bougies.⁴¹⁶ Yet, just two years later, John Andree complained that “suppurative, digestive, and specific bougies have been obtruded on the public by ignorant pretenders to the healing

⁴⁰⁷ Bayford, *Effects of Injections*, 76.

⁴⁰⁸ Turner related that one patient’s urinary passage “had been made so tender by the several Injections recommended.” Turner, *Discourse Concerning Gleans*, 25.

⁴⁰⁹ Bayford, *Effects of Injections*, 76.

⁴¹⁰ Peter Clare, *Treatise on the Gonorrhœa* (London, 1781), preface, iv.

⁴¹¹ *Ibid.*, 25.

⁴¹² Bree, *Observations Upon the Venereal Disease*, 88. The author of *London’s Medicinal-Informer* gave very specific instructions for the application of his advertised injection on how to use the syringe, recommending its application three or four times daily.

⁴¹³ Bree, *Observations Upon the Venereal Disease*, 29.

⁴¹⁴ Clare, *Treatise on the Gonorrhœa*, 16. Further drawing connections between digestion and nervous illness, Julien Offray de La Mettrie observed, “Because the imagination is disorder’d at the same time, as the entrails, and hence arise all the different surprising phænomena of the hysteric, and hypochondriac affections.” Julien Offray de La Mettrie, *Man a Machine; Translated from the French of the Marquiss D’Argens* (London: W. Owen, 1749), 8.

⁴¹⁵ For discussion of how treatment techniques, like the bougie, became established, see Foot, *Observation*, 1: 28.

⁴¹⁶ Marat, *Essay on Gleans*, 6.

art.”⁴¹⁷ As with injections, little consensus existed about the use of bougies. Also like injections, their prescribed and actual use varied tremendously. Andree recounted how “a young man came from the country to the London Hospital in April 1769, to be searched for the stone.”⁴¹⁸ This young man had about six months earlier suffered from a urinary stricture. According to the treatment prescribed for this stricture, he “introduced a boujie every night, tied it on the glans-penis, and went to bed with it thus secured.”⁴¹⁹ One morning he awoke and could not find the bougie or the ligature used to secure it; the instrument had passed into his bladder, necessitating a remarkable surgery and a museum piece.⁴²⁰ Others used bougies immediately after coitus or, as with injections, used them prophylactically.

Prophylactics were seen as a threat to the justified consequences of loose living and sexual liberality, according to the prevailing moral opinion. Yet, many prophylactics were introduced and used before and during the eighteenth century.⁴²¹ Even as early as the sixteenth century, the Italian anatomist-physician Gabriele Falloppio recommended preparing a medicated cloth and, similar to a bougie, taking “a Dossil of this Linnen, and put it into the Canal” as well as wiping down the member post-coitum.⁴²² Falloppio claimed to have “made the Experiment on 1100 Men, and not one of them have been infected.”⁴²³ Near the end of the seventeenth century, a publication appeared entitled *Prothylantinon*, which had a less moralizing approach to venereal disease than was typical.⁴²⁴ It included a section detailing “how to prevent the Pox by Bandage and Ligature, by Lotions, Decoctions and Suffiments.”⁴²⁵ Advertised quarterly in *The Proceedings of the Old Bailey* from April 1708

⁴¹⁷ Andree, *Essay on the Theory*, 49. For the important role Andree played in early descriptions of gonorrhoea, see Leon Elaut, “John Andree’s ‘Essay on Gonorrhoea,’” *Medical History* 19 (1975): 87-90.

⁴¹⁸ Andree, *Cure of the Venereal Gonorrhoea*, 53.

⁴¹⁹ *Ibid.*

⁴²⁰ In London, the surgeon Mr. Grindall performed an operation and “extracted a large boujie twisted together, and curiously encrusted with calculus substance on its surface. The man soon recovered, and Mr. Grindall preserves the boujie in his collection of calculi.” Andree, *Essay on the Theory*, 53.

⁴²¹ Quétel, *History of Syphilis*, 4. As Quétel suggested, “prophylactic measures involving the identification of ‘high-risk’ groups (notably prostitutes) were sketched out.” See Jon Arrizabalaga, “Medical Responses to the ‘French Disease’ in Europe at the Turn of the Sixteenth Century,” in *Sins of the Flesh: Responding to Sexual Disease in Early Modern Europe*, ed. Kevin Siena (Toronto: Centre for Reformation and Renaissance Studies), 49.

⁴²² Cockburn, *Symptoms, Nature, Cause, and Cure*, 178. He also made experiments with washing the private parts in various liquids, such as water, urine, and wine.

⁴²³ *Ibid.* Also mentioned by Astruc, *Treatise of the Venereal Disease*, 1: 296.

⁴²⁴ Allen, *Wages of Sin*, 50.

⁴²⁵ L. S., *Prothylantinon*, 43. The author further described that the curative “*Expedient* consists of two things, the *first* whereof is, a laying down some *Defensive Remedies* to secure particular persons from receiving *Infection* from *Pockie Women*. The *second* is a *Seclusion* of infected Courtizans from *Publique Converse*, but yet so as this *Seclusion* may be commodious to this Nation, and also a design of *Charity* to the *Prostitutes* themselves.”

till April 1710, The Charitable Surgeon offered “the certain easy way to escape Infection, tho’ never so often accompanying with the most polluted Companion.”⁴²⁶ Astruc was adamant “that neither a *Gonorrhæa* or and other Venereal disorders can be prevented, but by the remedies with which they are cur’d.”⁴²⁷ He felt that recommending prophylactics was unlawful, but not because it took “off the restraint that is at present laid upon the lusts of Men,”⁴²⁸ but because it meant “Whoremasters are expos’d to less danger.”⁴²⁹ Here Astruc voiced the recurrent idea that sexual disease curbed illicit and immoral behaviour, thereby bolstering order and restraint.

Prophylactics were one way that the promiscuous could escape the painful consequences of contracting venereal disease; but a matter of genital sensibility prevented some from adopting those cautionary measures.⁴³⁰ Cockburn wrote about “how to keep company with his Mistress, and to receive no Hurt from her Favours, tho’ she be infected.”⁴³¹ He recognized that for the pleasure-seeking rake or bawd perhaps the most convincing deterrent to prophylactics was a loss of sensation. In an acerbic tone, Cockburn related how

De Blegny, on the other hand, would varnish our Genitals and make them as insensible as the Boards this Liquor was really contrived for. It is stupid to think, that People, who run headlong into into [*sic*] Dangerous Pleasures, would ever acquiesce in a Method of preserving, to the Ruin of their great Aim; or any Insuring from Danger, would answer the Loss of their Pleasure: And it must always be reckoned, that plaistering, double skinning, and much less a *Septemplex Clypeus*, can ever pass with Men of Strong Passions and Desires.⁴³²

It was a hopeless case: those who desired sex most were least likely to use prophylactics and most exposed to disease. Cockburn concluded his discourse on prophylactics by observing that, more than other devices, “the late *Condon* has more universally prevail’d, tho’ with no small Damage to the Satisfaction.”⁴³³ Protecting against disorders like gonorrhoea presented

⁴²⁶ E.g. “Advertisements,” from 14th April 1708, *Old Bailey Proceedings Online* (www.oldbaileyonline.org, version 6.0), ref. a17080414-1.

⁴²⁷ Astruc, *Treatise of the Venereal Disease*, 1: 297.

⁴²⁸ *Ibid.*

⁴²⁹ *Ibid.*, 302. He thought it beneficial that “Magistrates never fail to order the infected harlot, to be instantly removed from the stews and put into a method of cure.”

⁴³⁰ Prophylactic injections, as Bayford described, were theorized to wash the urethra post coitum, and often included a certain “caustic Alkali,” which he thought was “a very improper medicine to be injected into the urinary canal.” Bayford, *Effects of Injections*, 51, 6.

⁴³¹ Cockburn, *Symptoms, Nature, Cause, and Cure*, 177.

⁴³² *Ibid.*, 186.

⁴³³ *Ibid.*

so much danger to the animal spirits and mind at the cost of diminishing the positive sexual sensations communicated between the groin and the mind was not an easy choice.

Gonorrhoea Narratives

Insensibility caused by donning a condom was a real concern, which William Pattison addressed in his “A Panegyric upon Cundums.” His poem introduces a typical and empathetic victim of venereal disease, “the hot daring Youth, whose giddy Lust / Or Taste too exquisite, in Danger’s Spite / Resolves upon *Fruition*.”⁴³⁴ Lamentably, this lusty youth had the same criticism as Cockburn, and determined to go “unimpair’d / By intervening Armour, CUNDUM.”⁴³⁵ The consequence of his imprudent sally was an infection, with all the tell-tale medical signs:

Scarce three Days past, bewails the dear-bought Bliss.
For now tormented sore with scalding Heat
Of Urine, dread Fore-runner of a Clap!
With Eye repentant, he surveys his Shirt,
Diversify’d with Spots of yellow Hue,
Sad Symptom of ten thousand Woes to come!⁴³⁶

It is a common eighteenth-century narrative theme—unbridled lust, ill-advised fornication, subsequent disease, progressive symptoms, desperation, destitution, and ultimately ruin. In particular, these narratives emphasized the constant struggle between the rational mind and sensible body. Not only did bodily desire and pleasure overcome reason in committing illicit sex acts, bodily pain and illness inspired despair and mental illnesses.

Pattison’s poem shows this conventional narrative in full. Desperate to escape his physical torments, the repentant youth faces the unenviable prospect of finding a cure from money-grubbing practitioners with indiscriminant remedies:

Now no Relief, but from the Surgeon’s Hand,
Or Pill-prescribing *Leach*, tremendous Sight
To Youth diseas’d! In Garret high he moans
His wretched Fate, where vex’d with nauseous *Draughts*
And more afflicting *Bolus*, he in Pangs
Unfelt before, curses the dire Result
Of lawless-Revelling; from Morn to Eve

⁴³⁴ William Pattison, “A Panegyric upon Cundums,” in *The Works of the Earls of Rochester, Roscomon, and Dorset: the Dukes of Devonshire, Buckinghamshire, &c.* (London, 1777), 2: 175. The poem was not attributed to Pattison in *The Works*, but it previously appeared in his *Cupid Metamorphoses or, Love in all Shapes* (London, 1728), 2: 305-12, under the title of “Allusion to the Splendid Shilling.” The poem “The Splendid Shilling” was also appended to the end of Edward Baynard’s many-times reprinted *Health a Poem* (Dublin, 1720).

⁴³⁵ *Ibid.*

⁴³⁶ *Ibid.*

By never-ceasing keen *Emetics* urg'd,⁴³⁷
Capping all his woes, the disease-ridden youth begins to descend into melancholy and hypochondria. His venereal plight inspires apprehensions and misgivings, as his personal ruin looms before him.

Nor feels he only but in megrim'd Head,
Head fraught with Horror—Child of sallow Spleen,
Millions of idle Whims and Fancies dance
Alternate, and perplex his lab'ring Mind.
What erst he has been told of sad Mischance
Either in *Pox* or *Clap*, of falling Nose,
Scrap'd Shins, and *Buboes*, Pains of vile Effect!
All feels the Youth, or fancies that he feels,
Nay, be it but a *Gleet*, or gentlest *Clap*,
His ill-foreboding Fears deny him Rest,
And fancied Poxes vex his tortur'd Bones;
Too late convinc'd of CUNDUM's Sov'reign Use."⁴³⁸

As in maternal impressions, pica, and febricula, the fancy played a troublesome role. The agitations of the youth's mind and animal spirits caused unhealthy imaginings, which he then felt in his body. Again, the idea that imagination could make real impressions upon the body was central. Although La Mettrie made an observation of "those who are overpower'd by melancholy, and their imagination deaden'd,"⁴³⁹ Pattison's description has a disturbed imagination propagating the afflicted youth's melancholy. Yet, his fear and loathing, exhorted the author, could have readily been avoided with "A well-made CUNDUM—He, nor dread the Ills / Of *Shankers*, or *Cordee*, or *Buboes* dire!"⁴⁴⁰

By the mid-eighteenth century, the danger and consequences of venereal disease was seen as a common threat, especially for those with fine feeling and wanton inclinations. The fear was that sexual desire would overcome reason, sexual disease would infect the body, and flagging animal spirits would impair the mind, leading to ruin. Falck rhetorically queried why there were so "many absurd debaucheries which fools of either sex hurry into, at the expence of their health and peace; when they with more ease and safety might enjoy the extacy of bliss of mutual embrace, accompanied with sincere friendship and real love, as the ultimate human felicity, agreeable to the bountiful Author's design?"⁴⁴¹ The answer was obvious: "Hypocrates was pleased to call the penis a head-strong, obstinate and unruly

⁴³⁷ Ibid.

⁴³⁸ Ibid.

⁴³⁹ La Mettrie, *Man a Machine*, 36.

⁴⁴⁰ Pattison, "Panegyric upon Cundums," 2: 174.

⁴⁴¹ Falck, *Venereal Disease*, 32-3.

animal. In many respects he was certainly right; for, when Venus inspires it with a passion of desire, it is furiously inclined to sacrifice every thing which makes the least obstruction in its way.”⁴⁴² But, women too hosted an unruly animal. Referring to the clitoris, Falck described how “there is not a part in all the organs of generation, but what this ruling little animal has an immediate connexion with; and at the command of this, every other part is ready and desirous for venereal embrace. This is too well known by the lewd, and carried by them into the grosiest abuse.”⁴⁴³ As far as Falck was concerned, the clitoris is the “seat of sensual pleasure in coitu in woman, like the glans penis in men, and which it resembles very much in miniature, except that it has no perforation.”⁴⁴⁴ These uncontrollable seats of pleasure, through their nervous connections with the mind and body, led both females and males to imprudent and immoral sexual acts.

These themes about unruly sex organs and venereal disease arose frequently in bawdy literature. For instance, Thompson’s *The Meretriciad* described a boisterous whore, whose sexual desire was an “Inhuman thirst, thou very vital drain.”⁴⁴⁵ Thompson continued to develop a kind of vampiric image: “But women crave while man’s a drop to give, / Nor cease to lust, until they cease to live.”⁴⁴⁶ This semen-lust, however, came directly from women’s genitalia. A similar perception of genitalia as a beast within provided the premise of the poem “Lord Rochester Against his Whore-Pipe.” This poem, which was attributed to John Wilmot, Earl of Rochester but has doubtful authorship,⁴⁴⁷ contains several references to features of both eighteenth-century gonorrhoea and theories about animal spirits, and which is worth quoting at length:

Was ever Mortal Man like me,
Continually in jeopardy,
And always, silly P—, by thee!
'Tis strange you should be still so stout!
Have you forgot the double Clout,
That lately swath'd your dropping Snout?

⁴⁴² *Ibid.*, 11.

⁴⁴³ *Ibid.*, 30. Falck further observed, “The clitores is a principle member towards generation, and its connexions are more extensive then in common has been taken notice of” (29).

⁴⁴⁴ *Ibid.*

⁴⁴⁵ Thompson, *Meretriciad*, 7.

⁴⁴⁶ *Ibid.*, 18.

⁴⁴⁷ This poem was attributed to Rochester only in a 1718 edition of *The Works of the Earls of Rochester, Roscomon, and Dorset: the Dukes of Devonshire, Buckinghamshire, &c.* and the sources descended from it. See David M. Vieth, ed., *The Complete Poems of John Wilmot, Earl of Rochester* (New Haven: Yale University Press, 1968), 218. A similar prosopopoeial poem that Harold Love categorizes as a disputed work of Rochester is “One Writing Against his Prick.” Harold Love, *The Works of John Wilmot Earl of Rochester* (Oxford: Oxford University Press, 1999), 264-65.

But why should I at that admire,
 When Ulcers, fill'd with liquid Fire,
 Could not from—make thee retire!
 But in these hot and rigid Pains,
 When Venom runs through all thy Veins,
 (The Product of thy tainted Reins)
 Then, even then, thou didst essay
 To lead me tim'rous Flesh astray,
 Still pushing, though you made no Way.
 There's not a Petticoat goes by,
 But from my Cod-piece out you fly,
 Not to be held 'twixt Hand and Thigh.
 I never felt a soft white Hand,
 But *Hector* like you strutting stand,
 As if the World you would command.
 Then must I never rest, 'till she
 Chase and squeeze out thy Lechery,
 Which is the very Strength of me.
 For all these crying Sins of thine,
 The suff'ring Part is always mine,
 'Tis I am cramm'd with *Turpentine*.
 For my Sake and you own, beware,
 Remember that you Mortal are,
 And liable to Scald and Scar.
 But if audaciously you still
 Will—be against my Will,
 Know, thus thy Leachery I'll kill.⁴⁴⁸

By personifying his penis, Wilmot could represent the competing desires and will within himself as a conversation. But, his attempt to reason with his member was futile; as Falck described and “Snout” suggests, Wilmot’s penis is more animal than man. The penis does not respond to Wilmot’s reasoning; it only follows brute desires and appetites. Yet, both Wilmot’s consciousness and the penis’ are susceptible to the pain of disease, the torments of treatment, and the lowness following over-ejaculation. To “squeeze out thy Lechery,” caused both the member and the man to lose their “very Strength.” According to this literary

⁴⁴⁸ John Wilmot, “Lord Rochester Against his Whore-Pipe,” in *The Works of the Earls of Rochester, Roscomon, and Dorset: the Dukes of Devonshire, Buckinghamshire, &c.* (London, 1777), 2: 170-1.

account, venereal disease precipitated violent, inevitably self-defeating, conflict between the mind and groin.

Other writers described genitalia not as possessing an animal will, but as another kind of sense that demanded attention. Turner, who was “London’s most outspoken author on venereal disease for over twenty years,”⁴⁴⁹ used this notion when he detailed “those inadvertent Youth, who to procure to themselves a momentary Pleasure, or, for the sake of the *sixth Sense*, have by the repeated Action so enfeebled their *Seminals*, that upon every slight Erection, nay without at sometimes, the *Semen* comes away insensibly.”⁴⁵⁰ By this understanding, genital pleasure can be abused and lost like—but more readily than—any other sense, similar to hearing loss from listening to too much loud music or sight loss from overstraining the eyes. This understanding of sexual desire as a sense also emerged in the anonymously published 1732 poem *The Progress of a Rake: or, the Templar’s Exit*. The poem tells of Dick, a young country squire, given to chasing women. His proclivity to libidinous activities is also imagined as a sixth sense:

If he but smell, or see, or touch,
The Sense affected, spurs him on,
Till all his Resolution’s gone,
And tho’ like Man he can dispute,
He’s but a reasonable Brute,
No wonder then the ungovern’d Youth,
Who, Calf like, has a Sugar Tooth,
Nor Sense, or Reason can control,
Shall run the hazard of his Soul,
To search for Sweets in dirty Holes.⁴⁵¹

Dick’s “Sweet Tooth” led him into the metropolis, debauched parties, and, eventually, into all the conventional types of trouble: immorality, lawlessness, familial disputes, financial destitution, and ill health.

In his attempts to regain solvency Dick establishes himself as a mountebank selling cures, but this scheme fails. The narrator suggests that Dick would have met with more success if

He should have learn’d a Clap to cure,
And then, to make himself secure,
Have got a hearty one, and then
Gone down to native Place again,

⁴⁴⁹ Wilson, “Exposing the Secret Disease,” 69.

⁴⁵⁰ Turner, *Discourse Concerning Gleets*, 5.

⁴⁵¹ *The Progress of a Rake: or, the Templar’s Exit* (London, 1732), 16-7.

There to disperse it round among
His Father's Tenants, Old and Young:
The Jobbs would then have been his own;
But *Dick* in Physick was a Drone.⁴⁵²

This quackish scam is reminiscent of the arousing inserts in treatises on venereal disease intended to incite readers to promiscuous thinking and behaviour, further spreading the disease and increasing the quack's business. Such schemes, which Marten was accused of, relied upon the power that reading was supposed to have on sensible people, especially in arousing sexual imaginings and feelings.⁴⁵³ John Spinke—Marten's most ardent critic—railed against him for making "*Anatomical Disquisitions* a Pretext for your *Bawdy Lectures*."⁴⁵⁴ "All you have writ in relation to *Anatomy*," sneered Spinke, "was by you intended only to stimulate Youth to *Lewdness*; Debauch their *Morals*, and prompt them to *vicious Courses* of Life, thereby to increase the number of *Clapt Patients*."⁴⁵⁵ Cockburn had this in mind in his prefatory remarks, where he stated his intention as leading "the Readers into a true Knowledge of its *Nature* and *Method of Cure* without exciting vicious Inclinations; whereas most Treatises, of late, seem rather designed to inflame the Youth with *Impure Notions*."⁴⁵⁶ For even the most serious-minded medical author, writing about sexual diseases "without polluting the Mind"⁴⁵⁷ was a tricky business. Authors were very aware of the power of literary description.

To return to Dick's worsening plight: his symptoms now progress, revealing both a gleetig gonorrhoea and the aches of rotting syphilis.

⁴⁵² *Ibid.*, 28.

⁴⁵³ Marten's writings annoyed "regular" practitioners for reasons beyond his boasts and slanderous remarks—he freely used erotic language. To guard against censure, Martin feigned propriety by cautioning his reader against the very thing he did, which was writing in a lewd manner. Marten, *Degrees and Symptoms*, 385. A few decades later there was a general concern that, by treating patients for venereal maladies at the Lock Hospital, practitioners were condoning vice. Linda E. Merians, "The London Lock Hospital and the Lock Asylum for Women," in *Secret Malady*, 129. See Allen, *Wages of Sin*, 49, which details how William Clowes refused treatment to licentious people.

⁴⁵⁴ John Spinke, *Quackery Unmask'd: or, Reflections on the Sixth Edition of Mr. Martin's Treatise of the Venereal Disease* (London, 1709), 82. Marten was indicted in 1709 for a lewd publication: his *Gonosologium Novum*, which was appended to the sixth edition of his book on venereal disease. For more details about this indictment, see David Foxon, *Libertine Literature in England, 1660-1745* (London: Shenvall Press, 1964), 13.

⁴⁵⁵ *Ibid.*, 82. A similar criticism was leveled at quacks by the anonymous author of *The Quack's Miscellany*, who condemned "the base Designs of some *modern Practitioners*, who without and further Design, than encouraging, young People to run on in Sin, and keep *Charon's Ferry-Boat* in perpetual Employ, make publick such things as Modesty would be ashamed of." *The Quack's Miscellany: in Prose and Verse* (London, 1732), 59. The author concluded that such medical smut was "a mighty Incouragement for Whoredom" (60).

⁴⁵⁶ Cockburn, *Symptoms, Nature, Cause, and Cure*, preface.

⁴⁵⁷ *Ibid.*

'Till Plagues come down upon him quick,
 And none to say, Alas! poor *Dick*.
 His Nose, his Throat, his Back, and Shins,
 All preach Repentance for his Sins;
 And that which was chief Instrument
 To make him Sin, does now repent
 Of Stings like Conscience, and it weeps,
 Both when he wakes and when he sleeps;
 It girds him 'till he grinds his Teeth,
 Above it shoots, and underneath
 Hangs such a Load—such Bags of Sorrow,⁴⁵⁸

The acme of his sorrows and symptoms is mental depression, which low and deplorable condition was further impressed upon the reader by an accompanying engraving (fig. 4.1). As medical writers emphasized, it was these “Bags of Sorrow” that most weighed down the patient. Upon his landlady discovering that Dick was “Dribbling her Sheets with Greens and Yellows,” she drove him out of her house as “She’d have no nasty, pocky Fellows.”⁴⁵⁹ This eviction was the death knell for Dick in his melancholic state. “Thus overwhelm’d with Pain and Care” Dick resolves to “have ended / With his Toledo” by cutting it off. Yet, Dick is unable to find a proper instrument and only manages to inflict a painful bruise.⁴⁶⁰ Eventually, Dick follows the fate of many in his state, and kills himself. Those who inspect Dick’s body agree that “He therefore must be Melancholy.”⁴⁶¹ Dick’s brother, who attends this inspection, gives his own interpretation of the suicide:

And Melancholy’s a Degree
 Of Madness.—Now I’ll prove, said he,
 This is a Running Mad: see here,
 Does not the Running plain appear?⁴⁶²

In this poetic depiction, a troublesome gleet became literally maddening, perpetuating bodily and mental illness to the point of utter destruction.

Some authors saw the initial sexual desire as the real point of madness. Turner described how “the Power of a libidinous Disposition, the Madness of Mankind unguarded; being out late at the other end of the Town, full of Money and as full of Wine, and passing by the *Synagogue of Satan*, on a *Masquerade Night*, a *She-devil* stepping out of a Chair, and seeing our young ’Squire well dress’d, press’d him to take a *Dominique* for a little

⁴⁵⁸ *Progress of a Rake*, 45.

⁴⁵⁹ *Ibid.*, 50.

⁴⁶⁰ *Ibid.*, 51.

⁴⁶¹ *Ibid.*, 53.

⁴⁶² *Ibid.*, 54.

Diversion.”⁴⁶³ This ostentatious description of a gentleman out on the town began one of Turner’s case studies. It continued, “Hence quickly after they were sedan’d to the *Bagnio*, the *Town Mansion-house of Lucifer*, were they bedded for an Hour, then dressing himself, he parted from the *destroying Angel* and return’d home. In few Days from this Rencounter, there appear’d new Symptoms.”⁴⁶⁴ Having shopped around and attempted several treatments, the young squire applied to Turner for help.⁴⁶⁵

As in nervous diseases, marriage was the surest cure for the madness of sexual desire and venereal disease. Another of Turner’s cases described “a mad young Fellow,” who was “as much a Disciple of *Bacchus* as of *Venus*, of a robust Habit, insomuch that he thought nothing could injure him.”⁴⁶⁶ Turner continued relating how “after he had been five times Clapt in less than two Years, once salivated, and for the greater part of the time very briskly purged, instead of his wonted yellow Running he was not long without, found himself at last constantly moisten’d with a clear Weeping.”⁴⁶⁷ With this lingering gleet in pocket, the fellow “link’d himself in Marriage; and in his Cups on the Wedding Night before Bedding, told he of his Misfortune: Upon which, suspecting he was still infected, she would not suffer him to touch her, but flew out in a different Passion.”⁴⁶⁸ The newlyweds remained in a “State of a conjunctive Separation” while he endeavored a full return to health. However, the wife eventually “was inform’d a Bastard Child was laid to him by her Maid” which some of her Friends, as well as himself, told her she might have prevented, by taking the Maid’s Place she had more Right to.”⁴⁶⁹ She took this reasoning to heart and sought Turner’s advice as to whether her husband was safe to sleep with. Turner, after examining him again, advises that he is not contagious. Turner assumed that the couple took up conjugal relations and that she continued without infection as, in time, the doctor heard that she was delivered of a baby.⁴⁷⁰

Similar to Turner’s advice, Hunter allowed that if there is no virulent matter running, then men are not infectious. This notion informed his advice to married couples: “I have gone so far as to allow husbands to cohabit with their wives in order to save appearances, and always with safety. I could carry this still farther, and even allow a man who has a gonorrhœa to have connection with a sound woman, if he took great care to clear all the parts of any matter, by first syringing the urethra, making water, and washing the

⁴⁶³ Turner, *Discourse Concerning Gleets*, 19.

⁴⁶⁴ *Ibid.*

⁴⁶⁵ *Ibid.*, 23.

⁴⁶⁶ *Ibid.*, 27.

⁴⁶⁷ *Ibid.*

⁴⁶⁸ *Ibid.*, 27-8.

⁴⁶⁹ *Ibid.*

⁴⁷⁰ *Ibid.*, 28-9.

glans.”⁴⁷¹ It is uncertain whether Hunter’s advice reflected a sincere belief that such men were not infectious, or he was pandering to his paying clients, or if his goal was the patients’ conjugal harmony. Behind pro-nuptial medical advice was the driving ideology that lust *unyoked* was socially disruptive and destructive.⁴⁷² Marriage was the greatest help for reason to control sexual desire and behaviour.⁴⁷³ Even though cases of marital affairs involving infections were widely publicized, medical authors tended to recommend marriage as a safeguard against sexual maladies. Such recommendations were either given because it was morally sound advice or from a sincere belief that the nuptial state quashed libertine tendencies and the spread of disease. The surest protection from and remedy for gonorrhoea was, according to Cooke, “honest Marriage.”⁴⁷⁴ Falck too gave a poignant pro-nuptial message along with a detailed account of a maid’s journey into whoredom and how her sexual acts with multiple partners engendered her infection and ruin.⁴⁷⁵ Marriage was construed as the surest method for counteracting imprudent sexual behaviour, which, if left unchecked, would eventually result in disease, pain, expense, isolation, desperation, ruin, and maybe death. Gonorrhoea, then, was more than just a symptom of venereal disease; it represented the outcome of certain lifestyles and activities, and profoundly instanced the interconnection of the sex organs, nerves, and mind in the medicine and literature that corresponded to the culture of sensibility.

Conclusion

Hunter’s clear and methodical treatise did not reiterate many of the prejudices and moralizations used and recycled in previous medical writings on gonorrhoea. Significantly, he also omitted alluding to nerves and animal spirits in discussing gonorrhoea and gleet.

⁴⁷¹ Hunter, *Venereal Disease*, 12.

⁴⁷² Looming marriage dates sent many infected libertines scrambling for fast cures. See Turner, *Discourse Concerning Gleans*, 14, 16, 38.

⁴⁷³ As John Burrows wrote, “How often has the Peace and Union of Families been disturbed by the ignominious Traces of Debauchery, which a young Bride discovered on her Bridegroom!” Quoted in Marie. E. McAllister, “John Burrows and the Vegetable Wars,” in *Secret Malady*, 85. Quoting John Burrows, *A Dissertation on the Nature and Effects of a New Vegetable Remedy* (London: printed for the author, 1780), 37. Mary Stewart suggests that venereal disease within marriage was “a problem in eighteenth-century England that was seldom openly discussed.” Mary Margaret Stewart, “‘And Blights with Plagues the Marriage Hearse:’ Syphilis and Wives,” in *Secret Malady*, 102-113. However, Allen has found that, “as early as 1504, infection became grounds for breaking off engagements, and even saying that someone was infected was enough to provoke a lawsuit.” Allen, *Wages of Sin*, 45. Citing specifically eighteenth-century examples, Rizzo shows how incredibly public the marital affairs involving sexual diseases of the landed gentry were. Betty Rizzo, “Decorums,” in *Secret Malady*. She particularly discusses Lords Barrymore and Bolingbroke.

⁴⁷⁴ Cooke, *Mellificium Chirurgiæ*, 233.

⁴⁷⁵ Falck, *Venereal Disease*, 85-91. Continuing his moral censures, Falck condemned sodomites and suggested that “of all infections, theirs is of the most shocking, and the most obstinate kind of any” (ibid.).

Hunter's treatise, which appeared shortly after Perfect's case studies, began with an unusual section, entitled "Of Sympathy." Therein he described how some body parts sympathise with sensations or actions of other body parts, particularly in diseases. This sympathy, for Hunter, was the basis for the non-local symptoms in venereal disease.⁴⁷⁶ The theory also resembles the principle of sensibility, especially the idea of internal, connected responses in both body and mind. As Hunter described: "Diseases must always arise from impressions made upon the body: and as man is probably susceptible of more impressions that become the immediate cause of disease than any other animal, and is besides the only animal which can be said to form artificial impressions upon himself, he is subject to the greatest variety of diseases."⁴⁷⁷

Hunter's biographer, Jesse Foot,⁴⁷⁸ justly criticized this theory of sympathy, by suggesting that idea had long been known by other names, such as "affections from irritation."⁴⁷⁹ However, in rebranding this older principle, Hunter had not based it upon animal spirits. Rather, he suggested lymphatics as the mechanism for sympathy in disease, although he failed to convincingly explain how such sympathy disseminated the effects of gonorrhoea throughout the body.⁴⁸⁰ Defending Hunter against Foot's attack, John Peake described "a sympathetic affection in our bodies, independent of our will, or the influence of external objects; therefore, perfectly distinct from condolence, or pity," which he understood as arising "from the brain and nerves."⁴⁸¹ For Peake, sympathy crucially explained "the whole train of hypochondriac and hysteric symptoms."⁴⁸² While Hunter deviated from prevailing ideas about animal spirits and nerves in gonorrhoea, his pathology descriptions and the debate about sympathy maintained the links between that malady, sensibility, sex, and the mind. However, Hunter also challenged beliefs about venereal diseases resulting from mental and nervous conditions. "A gleet," reasoned Hunter, "is supposed to be an attendant upon what we call a relaxed constitution; but I can hardly say that I have observed this to be the case."⁴⁸³ Delicate and nervous types were *not* more prone to gleans. Yet, he

⁴⁷⁶ Hunter, *Venereal Disease*, 1.

⁴⁷⁷ *Ibid.*, 10.

⁴⁷⁸ Jesse Foot, *The Life of John Hunter*, (London, 1794).

⁴⁷⁹ Foot, *Observations*, 2: 59. Quézel suggested that "in the second half of the eighteenth century, a third doctrine, the doctrine of sympathy, was advanced by Barthez, and subsequently by Hunter." Quézel, *History of Syphilis*, 79. For an example of the doctrine of sympathy before Hunter, see Sintelaer, *Scourge of Venus and Mercury*, 136.

⁴⁸⁰ Hunter, *Venereal Disease*, 68. "These constitutional sympathies from local specific diseases, are the same from whatever cause they proceed; they are the sympathetic effects of irritation or of violence, and it is probable that all remotes sympathies are, at least in this respect similar."

⁴⁸¹ John Peake, *A Candid Review of Jesse Foot's Observations on the New Opinions of John Hunter, in His Late Treatise on the Venereal Disease* (London, 1788), 6-7

⁴⁸² *Ibid.*, 6.

⁴⁸³ Hunter, *Venereal Disease*, 101.

retained the idea that gleans arise “from a habit of action which the parts have contracted,”⁴⁸⁴ which interpretation allowed masturbation, nocturnal pollutions, and excess venery to cause the disorder.

Experiment and observation winnowed away the plurality of theories about venereal diseases. Many authors began challenging the unicist theory, such as the Scottish physician Andrew Duncan, who queried in his observations following the treatment of a patient in 1777, “How far Gonorrhoea and Syphilis are, as has generally been supposed, to be considered as different modifications of the same disease?”⁴⁸⁵ Although some, such as Hunter, maintained that gonorrhoea was a part of the venereal disease,⁴⁸⁶ the unicist notion was slowly eroded and gonorrhoea became a disease unto itself in the last few decades of the century.⁴⁸⁷ This distinction followed two observations: that contracting gonorrhoea and syphilis were not mutually inclusive and that gonorrhoea had its own infectious matter.⁴⁸⁸ In the 1770s, Andree confidently declared that venereal disease was only communicable by “venereal matter or discharge.”⁴⁸⁹ As Andree related, “an ingenious surgeon has proved, that the discharge from a Gonorrhoea will produce a true venereal Chancre, by inoculating himself with a lancet which was moistened with such discharge.”⁴⁹⁰ This surgeon then re-inoculated himself from that second chancre to find that it too was virulent.⁴⁹¹ In the same decade, experiments by Hunter showed that venereal disease was not communicable to animals, as he made repeated trials to “give it to a dog, a bitch, or an ass.”⁴⁹²

⁴⁸⁴ Ibid., 99.

⁴⁸⁵ Duncan, *Medical Cases*, 208.

⁴⁸⁶ Hunter, *Venereal Disease*, 82.

⁴⁸⁷ See Quétel, *History of Syphilis*, 82. Quétel suggested that Balfour’s thesis from Edinburgh in 1767 “was the first to pose a serious threat to the unicist theory.”

⁴⁸⁸ The first observation followed from a famous nautical and epidemiology case study—the infection of the Tahitians. Indigenous inhabitants of Tahiti had no contact with gonorrhoea or syphilis until visited by European sailors, specifically those on the voyages of Captain Samuel Wallis, Louis Antoine de Bougainville, and Captain James Cook in the late 1760s. Many eighteenth-century writers followed the reports from Wallis’ voyage and called the island Otaheite. See Duncan, *Medical Cases*, 219-220. And of Captain Cook’s crew infecting the population of an island, the Otaheite, received only syphilis and not gonorrhoea. Some reports suggested that syphilis was introduced independent of gonorrhoea, although some, like Hunter, insisted that both diseases “propagated from one root.” See Duncan, *Medical Cases*, 217; Hunter, *Venereal Disease*, 14-5.

⁴⁸⁹ Andree, *Essay on the Theory*, 5.

⁴⁹⁰ Duncan, *Medical Cases*, 212. Investigators infected themselves with syphilis and gonorrhoea.

⁴⁹¹ Andree, *Essay on the Theory*, 19.

⁴⁹² Hunter, *Venereal Disease*, 20. Humans, however, were not the only test subjects for these inoculations. Previous observations had suggested that the venereal disease was common to animals as well: “Dr. Harvey is of Opinion that this Disease is common to Dogs: He tells us, he saw a little Cur in *Holland*, that had a Virulent Running of the Reins, with several crusty Ulcers upon his Body. He says farther, that in *Italy* many refrain eating Turkeys, because a great Number of them are found to be infected with the Pox; and I have many Times

New theories about how venereal disease affected the body and mind also appeared near the close of the eighteenth century, especially concerning electricity. For Hunter, electricity represented a potential cure; he reported that “electricity has been found to be of service in some cases, and therefore may be tried either in the first instance, or when other means have failed.”⁴⁹³ Other medical authors, such as Francis Lowndes, took notice of this innovation in curing gleans, with optimistic claims that “electricity has often been successfully employed to remove the relaxation which causes this complaint. It is recommended with this intention by Mr. J. Hunter, in his late celebrated work on the Venereal Disease.”⁴⁹⁴ Electricity was also adopted for understanding how venereal disease was spread. The theory that “the communication of the venereal virus is dependent on the laws of electricity” reflected, according to Quétel, “the vogue for experiments involving electricity and the extraordinary passion for Mesmer’s animal magnetism.”⁴⁹⁵ Susan Connor details how “a doctor attached to the French navy” described this theory of venereal disease transmission as reliant on “the presence of a *fluide électrique* that was set off by certain types of movements: the rhythmic rubbing of coitus, the friction of kissing, even flickering eyelids.”⁴⁹⁶ Just as nerves became expounded in terms of electricity rather than animal spirits, so too was venereal disease.

However, the legitimacy and significance of gonorrhoea, pica, and maternal impressions for most of the eighteenth century relied upon the credibility of animal spirits. The fates of these disorders in the last decades of the eighteenth century corresponded to the dwindling importance and diminishing plausibility of that physiological theory. But while that theory was current, sexual pathologies were profoundly connected to the mind. Medical discussions about venereal disease, which were often spliced with moral warnings, flagged up mental sequelae to scare straight the promiscuous. But, authors did not target all wanton types equally; the moneyed and educated classes were by far the most represented as susceptible to these mental and nervous consequences of loose lifestyle. So too were females from this social class most likely to be drawn into specific maternal mental experiences and conditions. Anxieties of a culture preoccupied with physical and emotional feeling and of a

observed a Dribbling of the Urine, with a bloody and purulent Matter issuing from the Penis of several Dogs, after their Congress with a hot Bitch.” Garlick, *Mechanical Account*, 27. Yet, although the virulent matter was identified, many medical practitioners still protested, “what the specific nature of the venereal poison is, mankind at present are totally ignorant of.” Clubbe, *Essay on the Virulent Gonorrhoea*, 9.

⁴⁹³ Hunter, *Venereal Disease*, 99.

⁴⁹⁴ Francis Lowndes, *Observations on Medical Electricity* (London, 1787), 38.

⁴⁹⁵ Quétel, *History of Syphilis*, 80.

⁴⁹⁶ Susan P. Conner, “The Pox in Eighteenth-Century France,” in *Secret Malady*, 19. “Obviously Le Bru, the author of the theory, had been influenced by Mesmer” (ibid.).

society increasingly money-conscious and individualistic were pointedly present in these eighteenth-century sexual pathologies.

Through medical debate, satirical verse, or sentimental novels, these disorders came to prominence in connection with understandings and anxieties about how the organs of generation, nerves, and the mind interrelated. Those diseases were inextricably bound to a specific social and cultural place and time defined by sensibility. Practitioners observed sensible constitutions, medicines balanced animal spirit economies, patients experienced nervous sequelae or side-effects, and people suffered from low, languishing, or exhausted spirits.

Figures: Chapter Four



Fig. 4.1 An illustration from *The Progress of a Rake: or, the Templar's Exit* (London, 1732). Sexual disease and the conventional plight of the sufferer are evidenced through certain medical and cultural signs: the chamberpot, dirtied linen, disheveled bed, unlashd bent sword, and his woeful expression. The cause of this unhappy scene is spelled out in the text on the desk, *Rochester's Poems*—a libertine's lifestyle. The future, however, is spelled on the wall, *A Harlot's Progress* engraving hangs in a picture frame. This figure is reminiscent of another literary character, the destitute hack writer alone in his garret. "Along with these complaints, and sometimes precedent to them, the patient is frequently tormented with violent acute pains in the head, arms and should-blades, shins and joints; they generally come on when in bed, and go off towards morning; these are called nocturnal pains."¹ Image from British Museum.

¹ Smyth, *New Treatise*, 23.

Conclusion

Having begun this dissertation with Laurence Sterne's *Sentimental Journey*, it is fitting to conclude with some further observations about that telling and significant text, particularly as it was published during the decline of animal spirit physiology. My argument has been that a specific physiological understanding about animal spirits and nerves defined understandings of how the organs of generation related to the mind as well instanced by Sterne's novel. This understanding became a central and recurrent theme in eighteenth-century literature of sensibility. Towards this argument, Martin Battestin observed that *Sentimental Journey* reveals "the physiology of sentiment."¹ Battestin detailed how time spent in Baron d'Holbach's coterie while living in France familiarized Sterne with the physiological arguments of notable philosophes such as Denis Diderot and David Hume.² Further insight into his exposure to physiological ideas is offered by the sale catalogue of Sterne's library, which was advertised by the book sellers J. Todd and H. Sotheran in York following Sterne's death in 1768.³ Although the sellers adulterated the catalogue with other texts, the listing still reveals the kinds of texts Sterne presumably, if not actually, owned. Texts that particularly resonate in his writings, such as John Locke's *An Essay on Human Understanding*, are found in multiple copies. Of medical and natural philosophical works, those of Thomas Willis, Herman Boerhaave, and George Cheyne are also well represented.⁴ Sterne's scene of blushes articulates the same dilemma about sexuality and volition as those physiologists once dwelled upon: is the body "more in fault than the man?" Battestin hinted at this theme by suggesting that *Sentimental Journey* grapples with how to reconcile "the laws of physiology and the freedom of the will."⁵ The irreconcilability of bodily physiology and intellectual will was for Sterne—as well as other writers of similar literary persuasion—best exemplified by sexual desire and rational thought.

Sterne's sentimental narratives consistently involve sexual feelings, passions, and behaviours that especially complicate the thoughts and actions of sensible characters. He accessed—and often satirized—those physiological discussions about nervous sensitivity, genitals, and minds that had been given serious attention in medical circles for the previous hundred years. For example, Sterne's sexually frugal character, Walter Shandy, is acutely

¹ Martin Battestin, "Sterne Among the Philosophes: Body and Soul in *A Sentimental Journey*," *Eighteenth-Century Fiction* 7, no. 1 (1994), 13.

² *Ibid.*, 1-18.

³ J. Todd and H. Sotheran, *A Catalogue of a Curious and Valuable Collection of Books, among which are included the Entire Library of the Late Reverend and Learned Laurence Sterne...* ([York?]: s.n., 1768).

⁴ About 3% or 70 of the 2500 items in the catalogue dealt with medicine, anatomy, or physiology.

⁵ Battestin, "Sterne Among the Philosophes," 13.

aware of the medical discussions linking sexuality and rationality. Proud of his rational intellect, Walter zealously guards his mental capacities. He also maintains a stringent sex schedule—indulging just on “the first *Sunday night* of every month.”⁶ This sexual reservation corresponds with the notion that sexual restraint stocked the spirits in the brain’s favour. Such intellectual caution was in keeping with common medical opinion: “Seminal fluid is almost of the same nature and quality with that fluid which is secreted in the brain, and distributed through all the nerves of the body; for which reason, the more plentiful the evacuation of the former is, the more scanty and defective the secretion of the other in the brain must of course be.”⁷ Yet, Sterne’s jocular treatment suggests these medical ideas were losing their once-high sophistication. When *Tristram Shandy* spoofed male anxieties about their involvement in conception, natural philosophical theories of mind-made seed, and a preformationist homunculus, Sterne’s attitude was indicative of the times. These were now outdated and laughable—albeit thought-provoking—medical notions, which included animal spirits.

When *Tristram Shandy* and *Sentimental Journey* were first published, natural philosophers, anatomists, and physicians had already begun exploring an alternative to animal spirits: electricity. This new physiological phenomenon was not mentioned as much as animal spirits in Sterne’s books; however, when electricity is mentioned, it is in relation to the same body/mind conundrum that animal spirits had explained: “A man and his Hobby-Horse, tho’ I cannot say that they act and re-act exactly after the same manner in which the soul and body do upon each other: Yet doubtless there is a communication between them of some kind; and my opinion rather is, that there is something in it more of the manner of electrified bodies.”⁸ As Tristram explains, the electricity in the case of men and hobby-horses comes from the friction of riding, emanating from the point of contact—the groin—up to the mind. Instead, he could have described how the friction stirred the animal spirits. But, electricity assumed many of the physiological, medical, philosophical, and literary roles once occupied by animal spirits. It was a displacement of ideas, the introduction of a new paradigm.

This shift to electricity also correlated to important changes in how sexuality, reproduction, and the body/mind relationship were understood and approached. Medical and literary writers both described reproductive organs as affecting the mind and body like electricity: spontaneous, jolting, powerful, and sometimes detrimental. Nerves lost much of

⁶ Laurence Sterne, *The Life and Opinions of Tristram Shandy, Gentleman*, in *The Florida Edition of the Works of Laurence Sterne*, eds. Melvyn New and Joan New (Gainesville: University Press of Florida, 1978), 1: 6.

⁷ *A Short Treatise on Onanism; or, the Detestable Vice of Self-Pollution...* (London: printed and sold by Fletcher and Co., 1767), 28.

⁸ Sterne, *Tristram Shandy*, 1: 86.

their vitalist qualities. Genitals were no longer stressed as nervous or autonomous centres with immense influence on the body and mind. Sexual organs lost their nervous power; they could not produce their own electricity. Instead, medics could induce involuntary responses in patients' sexual organs with electric stimulus, which access was part of an increased medicalization of sexuality.⁹ Cerebral material did not invest seminal material, and the expense of sexual fluids no longer drained the brain. The perception that sexual sensations could override rational thought and behaviour fell out of discussion. The power of sexual feeling became a more psychological and pathological issue. This change is noted, for example, in historical studies of hysteria in the nineteenth century.¹⁰ The mind, rather than the nervous qualities of genital organs, was seen as the source of passions. The history of hysteria also speaks to a wider change in gender and medical approaches to sexual disorders. Animal spirit physiology and the eighteenth-century culture of sensibility included the possibility that each sex had many similar sexual, sensory, and reproductive experiences. For all the cultural and social distinctions between females and males, early eighteenth-century physiological ideas about sex, reproduction, and nerves were relatively fluid and universal. However, nineteenth-century attention to nerves and sexuality emphasized more gender difference, and often to female disadvantage.¹¹ This change in gender was also closely linked to the rising notion of the modern self,¹² particularly the perception that individuals are innately sexed and gendered at birth.¹³ Animal spirits had supported numerous ideas about sex, bodies, and minds, which changed dramatically when electric neurophysiology was established. This conclusion offers some preliminary observations about these changes, flagging up further, postdoctoral, research into electricity, sexuality, and reproduction in Romantic medicine, science, and literature.

⁹ For historical studies that suggest a rising medicalization of sexuality in the nineteenth century, see Michel Foucault, *The History of Sexuality*, 3 vols. (London: Penguin, 1992 [orig. 1976, 1984, 1984]); Thomas Laqueur, *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA: Harvard University Press, 1990); Roy Porter and Lesley Hall, *The Facts of Life: The Creation of Sexual Knowledge in Britain, 1650-1950* (New Haven: Yale University Press, 1995).

¹⁰ Ilza Veith, *Hysteria: The History of a Disease* (Chicago: University of Chicago Press, 1965); Sander L. Gilman, Helen King, Roy Porter, G. S. Rousseau, Elaine Showalter, *Hysteria Beyond Freud* (Berkeley: University of California Press, 1993).

¹¹ For the pronounced gender division in sensibility in the late eighteenth-century, see G. J. Barker-Benfield, *The Culture of Sensibility: Sex and Society in Eighteenth-Century Britain* (Chicago: University of Chicago Press, 1992), 1-3.

¹² Dror Wahrman, *The Making of the Modern Self: Identity and Culture in Eighteenth-Century England* (New Haven: Yale University Press, 2004).

¹³ For this argument, see Geertje Mak, *Doubling Sex: Inscriptions, Bodies and Selves in Nineteenth-Century Hermaphrodite Case Histories* (Manchester: Manchester University Press, 2012).

From Animal Spirits to Electricity

The credence given to animal spirits in nervous physiologies waned quickly once experiments with nervous electric impulses proliferated in the later decades of the eighteenth century. Following the work of Luigi Galvani, individuals like Alexander Monro *secundus* and John Hunter began performing new, visually observable demonstrations on nerves using electricity.¹⁴ These demonstrations were a death-blow to animal spirit theories: new physiological terminology was introduced, anatomical demonstrations were no longer designed to prove animal spirits, and nerves lost much of their special vitalist role. This was a decades-long shift, with some animal spirit neurophysiology lingering in discussions about electricity. For instance, many mid-century physiological writings described electric *fluids* that acted according to the same hydraulic properties as animal spirits. However, near the close of the eighteenth century, William Smellie, the Scottish encyclopaedist and friend of Robert Burns, deemed animal spirits a “subject covered with darkness, and which all the efforts of human powers will probably never bring to light.”¹⁵

George Rousseau has suggested that not until “the early nineteenth century, when the reputation of the theory of animal spirits had diminished, that scientists were inclined to believe the problem had always been definitional.”¹⁶ It was not, however, just a definitional problem. As I have shown, there had been much consensus as to the nature of animal spirits. Experiments, demonstrations, and theories emphasized the idea that animal spirits were knowable and definable. Animal spirits may have eluded direct observation, but, as many physiologists argued, their effects were easily observed. Yet, animal spirits and hollow nerves were never persuasively demonstrated, unlike electric nerve experiments. The substantial flexibility in the definition of animal spirits, as Rousseau suggested, did facilitate their curbing in the wake of more convincing electric demonstrations. However, that same

¹⁴ John Hunter, “Anatomical Observations on the Torpedo,” *Philosophical Transactions of the Royal Society* 63 (1773): 481-488; John Hunter, “An Account of the *Gymnotus electricus*,” *Philosophical Transactions of the Royal Society* 65 (1775): 395-407; Alexander Monro *secundus*, “Experiments Relating to Animal Electricity,” *Transactions of the Royal Society of Edinburgh* (Edinburgh, 1792). For this history of early electric neuroscience, see Marco Bresadola, “Animal Electricity at the End of the Eighteenth Century: The Many Facets of a Great Scientific Controversy,” *Journal of the History of Neuroscience* 17, no. 1 (2008): 8-32; Marco Piccolino, “Visual Images in Luigi Galvani’s Path to Animal Electricity,” *Journal of the History of Neuroscience* 17, no. 3 (2008): 335-348.

¹⁵ William Smellie, *The Philosophy of Natural History* (Edinburgh, 1790), 1: 81. As Sharon Ruston described in her inaugural professorship lecture, “The Two Cultures of Literature and Science” (22 Feb. 2011), Smellie’s views on natural philosophy were cycled into literary discussions by Mary Wollstonecraft, who reviewed Smellie’s book in 1790 in the *Analytical Review* and adapted his views in some of her writings.

¹⁶ George Rousseau, “Science and the Discovery of the Imagination in Enlightened England,” *Eighteenth-Century Studies* 3, no. 1 (1969), 114-5. Although Rousseau suggests animal spirits were discredited in the early nineteenth century, he is aware that this skeptical attitude actually began several decades earlier.

flexibility and protean quality had allowed medics to explain numerous phenomena, ranging from voluntary motions to spontaneous emotions, in terms of animal spirits. In fact, from the 1660s till the 1780s, animal spirits were a central site of medical enquiry about generation, nerves and, by extension, the mind/body relationship. From the 1740s till the 1780s, they were essential for understanding the idea and culture of sensibility. At the close of the century, the dominant physiological understandings of male and female organs of generation—based on a combination of mechanical parts and spiritous fluid—fell from favour. For most of the eighteenth century, electricity in neurophysiology had slowly made gains.

Electricity in Neurophysiology and Medicine

Scientific enquiry into electricity with rigorous experimentation began in the 1730s. Medical applications of electricity immediately followed: “Electricity, at least from the 1740s onwards, was likewise seen as having medicinal benefits, and this was the paramount practical role for electricity up until the late nineteenth century, by which time electrification had become the paradigm form of treatment of nervous disorders,”¹⁷ according to Stephen Gaukroger. This new phenomenon progressively displaced animal spirits, especially as electrical experiments on nerves gained so much attention both within the medical faculty and among the public. The historian of neurology William Clower claims that in the late eighteenth and early nineteenth centuries there was “a scientific revolution in thinking.”¹⁸ This revolution was the shift from animal spirits to electricity in understandings of how nerves worked. Coupled to this neurophysiological revolution were dramatic changes in how sexuality was understood and treated. Sexuality, several historians have argued, became perceived as an essential part of the modern, gendered self. These two contemporaneous historical changes in medical thinking correlated to new ways of perceiving the body and mind in British Romantic culture.

Before this revolution, animal spirits had explained sexual feelings, arousal, procreative seed, conception, and various other kinds of reproductive phenomena; after this revolution, physicians, physiologists, and anatomists used electricity for these explanations. Texts like Marmaduke Berdoe’s *An Enquiry into the Influence of the Electric-Fluid in the Structure and Formation of Animated Beings* (1771) described electricity as essential to generating new life: a historical notion that, like Berdoe’s text, has hitherto escaped

¹⁷ Stephen Gaukroger, *The Collapse of Mechanism and the Rise of Sensibility: Science and the Shaping of Modernity, 1680-1760* (Oxford: Oxford University Press, 2010), 387.

¹⁸ William Clower, “The Transition from Animal Spirits to Animal Electricity: A Neuroscience Paradigm Shift,” *Journal of the History of the Neurosciences: Basic and Clinical Perspectives* 7, no. 3 (1998), 201.

scholarly notice.¹⁹ Animal spirits had explained sympathy, which related to sexuality, but physiologists from the mid-century onward increasingly used electricity in those explanations.²⁰ A transnational and transatlantic network formed of medical writers and experimenters, who applied electricity to sexual physiology and theories of generation. Notable figures included Benjamin Franklin, Tiberius Cavallo, Alessandro Volta, Luigi Galvani, Alexander Monro *secundus*, John Hunter, Charles Bell, François Magendie, and Georg Christoph Lichtenberg. Their neurophysiological experiments and reports on electricity frequently involved specific sexual organs, functions, and meanings. A central idea was that electricity connected the groin and the brain, as animal spirits had. Late eighteenth- and early nineteenth-century medical experiments, demonstrations, and therapies on electricity were frequently directed toward sexual organs and functions.

These experiments elicited unusually strong responses and favour, largely because previous generations of physiologists and anatomists had fruitlessly strained their eyes to observe the extremely fine and thin animal spirits and the minute, hollow center of nerves. Conversely, jolts in bodies and muscles during electrical experiments offered definite and convincing proofs. Public exhibits regularly featured displays of electricity in immediate proximity to displays about reproduction, further associating the two subjects. Museums such as Rackstrow's in London that showcased male and female reproductive organs had once used anatomies to demonstrate animal spirit physiology. But, as Rackstrow's instances, electrical demonstrations were first introduced in the mid-century, becoming more common in the later half.²¹ Experimenters, such as Volta, Galvani, Monro, and Hunter, applied electricity to various animal subjects, like frogs, rabbits, donkeys, dogs, and humans, both dead and alive. Their investigations often focused on what, if anything, electricity did in generation. Some contended that life could be created using electricity. Others interpreted involuntary movements caused by electric jolts to be akin to involuntary movements in the organs of generation, such as erections. Many experimenters and witnesses drew comparisons between sensations from electric shocks and sexual experiences. Among those observers were the literati, who drew tropes and themes from these demonstrations for their investigations and descriptions of sexual reproduction and electricity.

Electricity became a significant therapy for sexual maladies. Physicians, surgeons, and quacks experimented with electricity as a cure for sexual disorders, and often with

¹⁹ For an early, but hesitant, association of electricity to generation in a medical treatise, see Julien Offray de La Mettrie, *Man a Machine; Translated from the French of the Marquiss D'Argens* (London: W. Owen, 1749), 77.

²⁰ Helen Yallop, *Age and Identity in Eighteenth-Century England* (London: Pickering & Chatto, 2013), 100-101.

²¹ Benjamin Rackstrow, *Miscellaneous Observations, Together with a Collection of Experiments on Electricity. With the Manner of Performing Them* (London: 1748).

startling results for both patient and healer.²² Some case studies about healing with electricity tell of wonderful success and others relate regrettable misapplications of charges, sending patients flying across the room or running for the door.²³ Medical writers in the late eighteenth century began attributing venereal diseases, such as syphilis, to problems in sufferer's electrical physiology. John Hunter observed in his *A Treatise on the Venereal Disease* that "electricity has been found to be of service in some cases, and therefore may be tried either in the first instance, or when other means have failed."²⁴ Other practitioners readily promoted Hunter's unorthodox treatment. But, the sexual connotations that formed about electricity made Hunter, with his electric therapies and eel experiments, an easy target for satirists.²⁵

However, electricity was not prescribed only for sexual diseases, and Hunter was not alone in being satirized for his work with electricity and sex organs. James Graham offered electrical therapy for fertility problems at his London-based Temple of Hymen, which was an unusual blend of clinic and pleasure palace. Graham and his costly fertility treatments, which featured an electrified bed, were a sensation that was heavily criticized and satirized.²⁶ Yet, both his and Hunter's treatments instanced the new understanding of sexuality and reproduction based upon electricity. Pleasure, for example, became understood as an electrical principle. In the bawdy poem *Temple of Pleasure*, comic pleas are made for Graham to continue offering his therapeutic, and pleasurable, electric shocks.

To take your instructions they ever were willing,
 The Price was a trifle, no more then a shilling;
 But when you are gone, all their pleasure is o'er,
 Your electrical shock can delight them no more.²⁷

But, Graham was not the first to consider the physiology of pleasure as electrical. A telling exception in John Cleland's physiological descriptions was a single mention of electricity,

²² Palmé, *A Medical and Philosophical Dissertation on the Effects of a New Mode of Electricity; for the Cure of Paralytic, Muscular, and other Contractions; Rheumatic, Nervous, and Spasmodic Disorders, and Female Obstructions* (Dublin: H. Whitestone, 1784).

²³ Henry Bemrose, *Observations on Medical Electricity: Including a Great Number of Cases in which Electricity has been Successfully Applied* (London, 1794).

²⁴ John Hunter, *A Treatise on the Venereal Disease* (London, 1786), 99.

²⁵ Christopher Plumb, "The 'electric stroke' and the 'electric spark': Anatomists and Eroticism at George Baker's Electric Eel Exhibition in 1776 and 1777," *Endeavour* 34, no. 3 (2010), 87. This transition occurred in the 1770s, as evidenced by the mocking use of John Hunter "in erotic and satirical literature" on electric eels, which followed from his earlier dissections of those creatures.

²⁶ *The Temple of Pleasure: A Poem. To which is added a Lamentation on Dr. Graham's Declaration that He Intends Going to the Continent. Likewise, a Poetical Epistle from Vestina the Rosy Goddess of Health, to Dr. Graham, the Prince of Quacks* (London, 1783).

²⁷ *Ibid.*, 22.

near the end of the novel. He described sexual desire as “that principle of electricity which scarce ever fails of producing fire, when the sexes meet.”²⁸ This early literary reference to electricity signals the very beginnings of that physiology replacing animal spirits in discussions about nerves and generation.

Literature and the New Electric Paradigm

The neurophysiological paradigm shift correlated with changing literary modes at the close of the eighteenth century. As electricity became used as a literary trope and theme, certain ideas about sexuality and sensibility remained intact while others fell away. The debunking of animal spirits hastened the eventual demise of sensibility. Even at the turn of the century, sensibility had become a less desirable attribute, more associated with females, and more broadly criticized in earnest rather than in jest.²⁹ Literary attention to the medicine and science of electricity correlated to the rise of a new genre: gothic fiction. Texts like Mary Shelley’s *Frankenstein* (1818) explored, with suspicion, medical ideas about electricity and generation.³⁰ But like animal spirits, electricity also related to the sensory, emotions, responses, and how external events affect the body and mind. But, these ideas had different meanings and connotations. Animal spirits could be gently stirred, moderately irritated, or violently agitated, whereas electricity involved shocks, sparks, and currents. The changes in physiological demonstration, terminology, and theory carried cultural freight. The kind of sensory stimulations, internal motions, and outward responses changed in the literary and the physiological understandings of nerves.

Literary authors adopted electrical terms and themes in representing sex, in genres ranging from bawdy poetry to polite sentimental novels. Consequently, medical and literary writers described reproductive organs as affecting the mind and body like electricity: spontaneous, jolting, powerful, and sometimes detrimental. In the abundance of erotic, bawdy, and satirical treatments linking electricity with sexual meanings, electric eels and torpedo rays became sexual metaphors, especially for penises.³¹ The dirty connotations of syringes diminished, particularly as clysters also fell out of medics’ repertoires and anatomical injections became a less esteemed technique. The incorporation of electrical terminology and imagery into the register of erotic literature involved new meanings for the sexual organs, physiology, and roles of each gender. Yet, animal spirits were so firmly

²⁸ *Ibid.*, 211.

²⁹ For this perspective on sensibility and its eighteenth-century critics, see Ildiko Csengei, *Sympathy, Sensibility and the Literature of Feeling in the Eighteenth Century* (Basingstoke: Palgrave Macmillan, 2012), 141.

³⁰ Mary Shelley, *Frankenstein; or, The Modern Prometheus* (London, 1818).

³¹ See *The Electrical Eel: Or, Gymnotus Electricus, and the Torpedo; A Poem*, (London, c. 1774); Adam Strong [pseud., James Perry?], *Electrical Eel; Or, Gymnotus Electricus. Inscribed to the Honourable Members of the R***l S*****y* (London, 1777).

entrenched in the literary understanding and register of sensibility and sexuality that its terminology lingered on into the early nineteenth century.

For the majority of the eighteenth century, an economy of animal spirits and seed had defined most facets of sexuality and reproduction, including everything from pathology, procreation, and morality to psychology, sociability, and wellbeing. The onanism movement, for instance, would not have happened without the existing physiological idea that ejaculation diminished levels of animal spirits and, consequently, impinged upon mental ability. Anatomical demonstrations of genitalia, philosophical discussions about sensations, and pathological descriptions of reproductive disorders similarly referred to the notion that animal spirits circulated between the brain and groin. All manner of sexual representations, whether medical, philosophical, literary, or artistic, portrayed a nerve-bound body wherein a rational mind competed with the inclinations of innately salacious genitals. The profound influence of this physiological understanding can be seen throughout eighteenth-century sensibility and, on occasion, was fully laid bare by writers and artists intent on dissecting the sexual body and mind. Recognizing the qualities of the animal spirit and nerve economy, therefore, is essential to understanding British perceptions and representations of sex and reproduction that were formulated in intellectual discussions during the long eighteenth century.

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