Making SEX
BODY AND GENDER FROM THE GREEKS TO FREUD
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Of Language and the Flesh

The first thing that strikes the careless observer is that women are unlike men. They are "the opposite sex" (though why "opposite" I do not know; what is the "neighboring sex"?). But the fundamental thing is that women are more like men than anything else in the world.

DOROTHY L. SAYERS
"THE HUMAN-NOT-QUITE-HUMAN"

An interpretive chasm separates two interpretations, fifty years apart, of the same story of death and desire told by an eighteenth-century physician obsessed with the problem of distinguishing real from apparent death. ¹

The story begins when a young aristocrat whose family circumstances forced him into religious orders came one day to a country inn. He found the innkeepers overwhelmed with grief at the death of their only daughter, a girl of great beauty. She was not to be buried until the next day, and the bereaved parents asked the young monk to keep watch over her body through the night. This he did, and more. Reports of her beauty had piqued his curiosity. He pulled back the shroud and, instead of finding the corpse "disfigured by the horrors of death," found its features still gracefully animated. The young man lost all restraint, forgot his vows, and took "the same liberties with the dead that the sacraments of marriage would have permitted in life." Ashamed of what he had done, the hapless necrophilic monk departed hastily in the morning without waiting for the scheduled interment.

When time for burial came, indeed just as the coffin bearing the dead girl was being lowered into the ground, someone felt movement coming from the inside. The lid was torn off; the girl began to stir and soon recovered from what proved not to have been real death at all but only a
coma. Needless to say, the parents were overjoyed to have their daughter back, although their pleasure was severely diminished by the discovery that she was pregnant and, moreover, could give no satisfactory account of how she had come to be that way. In their embarrassment, the innkeepers consigned the daughter to a convent as soon as her baby was born.

Soon business brought the young aristocrat, oblivious of the consequences of his passion but far richer and no longer in holy orders because he had come into his inheritance, back to the scene of his crime. Once again he found the innkeepers in a state of consternation and quickly understood his part in causing their misfortune. He hastened to the convent and found the object of his necrophilic desire more beautiful alive than dead. He asked for her hand and with the sacrament of marriage legitimized their child.

The moral that Jacques-Jean Bruhier asks his readers to draw from this story is that only scientific tests can make certain that a person is really dead and that even very intimate contact with a body leaves room for mistakes. But Bruhier’s contemporary, the noted surgeon Antoine Louis, came to a very different conclusion, one more germane to the subject of this book, when he analyzed the case in 1752. Based on the evidence that Bruhier himself offered, Louis argues, no one could have doubted that the girl was not dead: she did not, as the young monk testified, look dead and moreover who knows if she did not give some “demonstrative signs” in proof of her liveness, signs that any eighteenth-century doctor or even layperson would have expected in the circumstances.

Bruhier earlier on in his book had cited numerous instances of seemingly dead young women who were revived and saved from untimely burial by amorous embraces; sexual ecstasy, “dying” in eighteenth-century parlance, turned out for some to be the path to life. Love, that “wonderful satisfactory Death and . . . voluntary Separation of Soul and Body,” as an English physician called it, guarded the gates of the tomb. But in this case it would have seemed extremely unlikely to an eighteenth-century observer that the innkeepers’ daughter could have conceived a child without moving and thereby betraying her death. Any medical book or one of the scores of popular midwifery, health, or marriage manuals circulating in all the languages of Europe reported it as a commonplace that “when the seed issues in the act of generation [from both men and women] there at the same time arises an extra-ordinary titillation and delight in all members of the body.” Without orgasm, another widely circulated text announced, “the fair sex [would] neither desire nuptial embraces, nor have pleasure in them, nor conceive by them.”

The girl must have shuddered, just a bit. If not her rosy cheeks then the tremors of venereal orgasm would have given her away. Bruhier’s story was thus one of fraud and not of apparent death; the innkeepers’ daughter and the monk simply conspired, Louis concludes, to escape culpability by feigning coma until the last possible moment before burial.

In 1836 the tale was told again, but now with a new twist. This time, the reality of the girl’s deathlike comatose state was not questioned. On the contrary, her becoming pregnant under these conditions was cited by Dr. Michael Ryan as one among many other cases of intercourse with insensible women to prove that orgasm was irrelevant to conception. (In one story, for example, an ostler confesses that he came to an inn and had sex with, and made pregnant, a girl who was so dead asleep before the fire that he was long gone before she awoke.) Not only need a woman not feel pleasure to conceive; she need not even be conscious.

Near the end of the Enlightenment, in the period between these two rehearsals of the tale of the innkeepers’ daughter, medical science and those who relied on it ceased to regard the female orgasm as relevant to generation. Conception, it was held, could take place secretly, with no telltale shivers or signs of arousal; the ancient wisdom that “apart from pleasure nothing of mortal kind comes into existence” was uprooted. Previously a sign of the generative process, deeply embedded in the bodies of men and women, a feeling whose existence was no more open to debate than was the warm, pleasurable glow that usually accompanies a good meal, orgasm was relegated to the realm of mere sensation, to the periphery of human physiology—accidental, expendable, a contingent bonus of the reproductive act.

This reorientation applied in principle to the sexual functioning of both men and women. But no one writing on such matters ever so much as entertained the idea that male passions and pleasures in general did not exist or that orgasm did not accompany ejaculation during coition. Not so for women. The newly “discovered” contingency of delight opened up the possibility of female passivity and “passionlessness.” The purported independence of generation from pleasure created the space in which women’s sexual nature could be redefined, debated, denied, or qualified. And so it was of course. Endlessly.

The old valences were overturned. The commonplace of much contemporary psychology—that men want sex while women want relation-
ships—is the precise inversion of pre-Enlightenment notions that, extending back to antiquity, equated friendship with men and fleshliness with women. Women, whose desires knew no bounds in the old scheme of things, and whose reason offered so little resistance to passion, became in some accounts creatures whose whole reproductive life might be spent anesthetized to the pleasures of the flesh. When, in the late eighteenth century, it became a possibility that “the majority of women are not much troubled with sexual feelings,” the presence or absence of orgasm became a biological signpost of sexual difference.

The new conceptualization of female orgasm, however, was but one formulation of a more radical eighteenth-century reinterpretation of the female body in relation to the male. For thousands of years it had been a commonplace that women had the same genitals as men except that, as Nemesius, bishop of Emesa in the fourth century, put it: “Theirs are inside the body and not outside it.” Galen, who in the second century A.D. developed the most powerful and resilient model of the structural, though not spatial, identity of the male and female reproductive organs, demonstrated at length that women were essentially men in whom a lack of vital heat—of perfection—had resulted in the retention, inside, of structures that in the male are visible without. Indeed, doggerel verse of the early nineteenth century still sings of these hoary homologies long after they had disappeared from learned texts:

though they of different sexes be,
    Yet on the whole they are the same as we,
For those that have the strictest searchers been,
    Find women are but men turned outside in.

In this world the vagina is imagined as an interior penis, the labia as foreskin, the uterus as scrotum, and the ovaries as testicles. The learned Galen could cite the dissections of the Alexandrian anatomist Herophilus, in the third century B.C., to support his claim that a woman has testes with accompanying seminal ducts very much like the man’s, one on each side of the uterus, the only difference being that the male’s are contained in the scrotum and the female’s are not.

Language marks this view of sexual difference. For two millennia the ovary, an organ that by the early nineteenth century had become a synecdoche for woman, had not even a name of its own. Galen refers to it by the same word he uses for the male testes, *orchēs*, allowing context to make clear which sex he is concerned with. Herophilus had called the ovaries *didymoi* (twins), another standard Greek word for testicles, and was so caught up in the female-as-male model that he saw the Fallopian tubes—the spermatic ducts that led from each “testicle”—as growing into the neck of the bladder as do the spermatic ducts in men. They very clearly do not. Galen points out this error, surprised that so careful an observer could have committed it, and yet the correction had no effect on the status of the model as a whole. Nor is there any technical term in Latin or Greek, or in the European vernaculars until around 1700, for vagina as the tube or sheath into which its opposite, the penis, fits and through which the infant is born.

But then, in or about the late eighteenth, to use Virginia Woolf’s device, human sexual nature changed. On this point, at least, scholars are theoretically distant from one another as Michel Foucault, Ivan Illich, and Lawrence Stone agree. By around 1800, writers of all sorts were determined to base what they insisted were fundamental differences between the male and female sexes, and thus between man and woman, on discoverable biological distinctions and to express these in a radically different rhetoric. In 1803, for example, Jacques-Louis Moreau, one of the founders of “moral anthropology,” argued passionately against the nonsense written by Aristotle, Galen, and their modern followers on the subject of women in relation to men. Not only are the sexes different, but they are different in every conceivable aspect of body and soul, in every physical and moral aspect. To the physician or the naturalist, the relation of woman to man is “a series of oppositions and contrasts.” In place of what, in certain situations, strikes the modern imagination as an almost perverse insistence on understanding sexual difference as a matter of degree, gradations of one basic male type, there arose a shrill call to articulate sharp corporeal distinctions. Doctors claimed to be able to identify “the essential features that belong to her, that serve to distinguish her, that make her what she is”:

All parts of her body present the same differences: all express woman; the brow, the nose, the eyes, the mouth, the ears, the chin, the cheeks. If we shift our view to the inside, and with the help of the scalpel, lay bare the organs, the tissues, the fibers, we encounter everywhere...the same difference.

Thus the old model, in which men and women were arrayed according to their degree of metaphysical perfection, their vital heat, along an axis
whose telos was male, gave way by the late eighteenth century to a new model of radical dimorphism, of biological divergence. An anatomy and physiology of incommensurability replaced a metaphysics of hierarchy in the representation of woman in relation to man.

By the late nineteenth century, so it was argued, the new difference could be demonstrated not just in visible bodies but in its microscopic building blocks. Sexual difference in kind, not degree, seemed solidly grounded in nature. Patrick Geddes, a prominent professor of biology as well as a town planner and writer on a wide range of social issues, used cellular physiology to explain the “fact” that women were “more passive, conservative, sluggish and stable” than men, while men were “more active, energetic, eager, passionate, and variable.” He thought that with rare exceptions—the sea horse, the occasional species of bird—males were constituted of catabolic cells, cells that put out energy. They spent income, in one of Geddes’ favorite metaphors. Female cells, on the other hand, were anabolic; they stored up and conserved energy. And though he admitted that he could not fully elaborate the connection between these biological differences and the “resulting psychological and social differentiations,” he nevertheless justified the respective cultural roles of men and women with breathtaking boldness. Differences may be exaggerated or lessened, but to obliterate them “it would be necessary to have all the evolution over again on a new basis. What was decided among the pre-historic Protozoa cannot be annulled by an act of Parliament.” Microscopic organisms wallowing in the primordial ooze determined the irreducible distinctions between the sexes and the place of each in society.

These formulations suggest a third and still more general aspect of the shift in the meaning of sexual difference. The dominant, though by no means universal, view since the eighteenth century has been that there are two stable, incommensurable, opposite sexes and that the political, economic, and cultural lives of men and women, their gender roles, are somehow based on these “facts.” Biology—the stable, ahistorical, sexed body—is understood to be the epistemic foundation for prescriptive claims about the social order. Beginning dramatically in the Enlightenment, there was a seemingly endless stream of books and chapters of books whose very titles belie their commitment to this new vision of nature and culture: Rousseau’s *Système physique et moral de la femme*, Brahe’s chapter “Études du physique et du moral de la femme,” Thompson and Geddes’ starkly uncompromising *Sex*. The physical “real” world in these accounts, and in the hundreds like them, is prior to and logically independent of the claims made in its name.

Earlier writers from the Greeks onward could obviously distinguish nature from culture, *physis* from *nomos* (though these categories are the creation of a particular moment and had different meanings then). But, as I gathered and worked through the material that forms this book, it became increasingly clear that it is very difficult to read ancient, medieval, and Renaissance texts about the body with the epistemological lens of the Enlightenment through which the physical world—the body—appears as “real,” while its cultural meanings are epiphenomenal. Bodies in these texts did strange, remarkable, and to modern readers impossible things. In future generations, writes Origen, “the body would become less ‘thick,’ less ‘coagulated,’ less ‘hardened,’” as the spirit warmed to God; physical bodies themselves would have been radically different before the fall, imagines Gregory of Nyssa: male and female coexisted with the image of God, and sexual differentiation came about only as the representation in the flesh of the fall from grace. (In a nineteenth-century Urdu guide for ladies, based firmly in Galenic medicine, the prophet Mohammed is listed at the top of a list of exemplary women.) Caroline Bynum writes about women who in imitation of Christ received the stigma or did not require food or whose flesh did not stick when purifying. There are numerous accounts of men who were said to lactate and pictures of the boy Jesus with breasts. Girls could turn into boys, and men who associated too extensively with women could lose the hardness and definition of their more perfect bodies and regress into effeminacy. Culture, in short, suffused and changed the body that to the modern sensibility seems so closed, airtight, and outside the realm of meaning.

One might of course deny that such things happened or read them as entirely metaphorical or give individual, naturalistic explanations for otherwise bizarre occurrences: the girl chasing her swine who suddenly sprung an external penis and scrotum, reported by Montaigne and the sixteenth-century surgeon Ambroise Paré as an instance of sex change, was really suffering from androgen-dihydrotestosterone deficiency; she was really a boy all along who developed external male organs in puberty, though perhaps not as precipitously as these accounts would have it. This, however, is an unconsciously external, ahistorical, and impoverished approach to a vast and complex literature about the body and culture.
suspect for a variety of methodological reasons, or ambiguous, or proof of Dorothy Sayers' notion that men and women are very close neighbors indeed if it is proof of anything at all.

To be sure, difference and sameness, more or less recondite, are everywhere; but which ones count and for what ends is determined outside the bounds of empirical investigation. The fact that at one time the dominant discourse construed the male and female bodies as hierarchically, vertically, ordered versions of one sex and at another time as horizontally ordered opposites, as incomparable, must depend on something other than even a great constellation of real or supposed discoveries.

Moreover, nineteenth-century advances in developmental anatomy (germ-layer theory) pointed to the common origins of both sexes in a morphologically androgynous embryo and thus not to their intrinsic difference. Indeed, the Galenic isomorphisms of male and female organs were by the 1850s rearticulated at the embryological level as homologies: the penis and the clitoris, the labia and the scrotum, the ovary and the testes, scientists discovered, shared common origins in fetal life. There was thus scientific evidence in support of the old view should it have been culturally relevant. Or, conversely, no one was much interested in looking for evidence of two distinct sexes, at the anatomical and concrete physiological differences between men and women, until such differences became politically important. It was not, for example, until 1759 that anyone bothered to reproduce a detailed female skeleton in an anatomy book to illustrate its difference from the male. Up to this time there had been one basic structure for the human body, and that structure was male. And when differences were discovered they were already, in the very form of their representation, deeply marked by the power politics of gender.

Instead of being the consequence of increased specific scientific knowledge, new ways of interpreting the body were the result of two broader, analytically though not historically distinct, developments: one epistemological, the other political. By the late seventeenth century, in certain specific contexts, the body was no longer regarded as a microcosm of some larger order in which each bit of nature is positioned within layer upon layer of signification. Science no longer generated the hierarchies of analogies, the resemblances that bring the whole world into every scientific endeavor but thereby create a body of knowledge that is, as Foucault argues, at once endless and poverty-stricken. Sex as it has been seen since the Enlightenment—as the biological foundation of what it is to be male and female—was made possible by this epistemic shift.

But epistemology alone does not produce two opposite sexes; it does so only in certain political circumstances. Politics, broadly understood as the competition for power, generates new ways of constituting the subject and the social realities within which humans dwell. Serious talk about sexuality is thus inevitably about the social order in which it both represents and legitimates. “Society,” writes Maurice Godelier, “haunts the body’s sexuality.”

Ancient accounts of reproductive biology, still persuasive in the early eighteenth century, linked the intimate, experiential qualities of sexual delight to the social and the cosmic order. More generally, biology and human sexual experience mirrored the metaphysical reality on which, it was thought, the social order rested. The new biology, with its search for fundamental differences between the sexes, of which the tortured questioning of the very existence of women’s sexual pleasure was a part, emerged at precisely the time when the foundations of the old social order were shaken once and for all.

But social and political changes are not, in themselves, explanations for the reinterpretation of bodies. The rise of evangelical religion, Enlightenment political theory, the development of new sorts of public spaces in the eighteenth century, Lockean ideas of marriage as a contract, the catastrophic possibilities for social change wrought by the French revolution, postrevolutionary conservatism, postrevolutionary feminism, the factory system with its restructuring of the sexual division of labor, the rise of a free market economy in services or commodities, the birth of classes, singly or in combination—all of these things caused the making of a new sexed body. Instead, the making of the body is itself intrinsic to each of these developments.

This book, then, is about the making not of gender, but of sex. I have no interest in denying the reality of sex or of sexual dimorphism as an evolutionary process. But I want to show on the basis of historical evidence that almost everything one wants to say about sex—however sex is understood—already has in it a claim about gender. Sex, in both the one-sex and the two-sex worlds, is situational; it is explicable only within the context of battles over gender and power.

To a great extent my book and feminist scholarship in general are inextricably caught in the tensions of this formulation: between language on
the one hand and extralinguistic reality on the other; between nature and culture; between "biological sex" and the endless social and political markers of difference. We remain poised between the body as that extraordinarily fragile, feeling, and transient mass of flesh with which we are all familiar—too familiar—and the body that is so hopelessly bound to its cultural meanings as to elude unmediated access.

The analytical distinction between sex and gender gives voice to these alternatives and has always been precarious. In addition to those who would eliminate gender by arguing that so-called cultural differences are really natural, there has been a powerful tendency among feminists to empty sex of its content by arguing, conversely, that natural differences are really cultural. Already by 1975, in Gayle Rubin's classic account of how a social sex/gender system "transforms biological sexuality into products of human activity," the presence of the body is so veiled as to be almost hidden. Sherry Ortner and Harriet Whitehead further erode the body's priority over language with their self-conscious use of quotation marks around "given" in the claim that "what gender is, what men and women are... do not simply reflect or elaborate upon biological 'givens' but are largely products of social and cultural processes." It is also dangerous to place the body at the center of a search for female identity," reads a French feminist manifesto.

But if not the body, then what? Under the influence of Foucault, various versions of deconstruction, Lacanian psychoanalysis, and poststructuralism generally, it threatens to disappear entirely. (The deconstruction of stable meaning in texts can be regarded as the general case of the deconstruction of sexual difference: "what can 'identity'; even 'sexual identity,' mean in a new theoretical and scientific space where the very notion of identity is challenged?") These strategies have begun to have considerable impact among historians. Gender to Joan Scott, for example, is not a category that mediates between biological difference on the one hand and historically contingent social relations on the other. Rather it includes both biology and society: "a constitutive element of social relationships based on perceived differences between the sexes... a primary way of signifying relationships of power."

But feminists do not need French philosophy to repudiate the sex/gender distinction. For quite different reasons, Catharine MacKinnon argues explicitly that gender is the division of men and women caused "by the social requirements of heterosexuality, which institutionalizes male sexual dominance and female sexual submission"; sex—which comes to the same thing—is social relations "organized so that men may dominate and women must submit."

"Science," Ruth Bleier argues, mistakenly views "gender attributions as natural categories for which biological explanations are appropriate and even necessary." Thus some of the so-called sex differences in biological and sociological research turn out to be gender differences after all, and the distinction between nature and culture collapses as the former folds into the latter.

Finally, from a different philosophical perspective, Foucault has even further rendered problematic the nature of human sexuality in relation to the body. Sexuality is not, he argues, an inherent quality of the flesh that various societies extol or repress—not, as Freud would seem to have it, a biological drive that civilization channels in one direction or another. It is instead a way of fashioning the self "in the experience of the flesh," which itself is "constituted from and around certain forms of behavior."

These forms, in turn, exist in relation to historically specifiable systems of knowledge, rules of what is or is not natural, and to what Foucault calls "a mode or relation between the individual and himself which enables him to recognize himself as a sexual subject amidst others." (More generally, these systems of knowledge determine what can be thought within them.) Sexuality as a singular and all-important human attribute with a specific object—the opposite sex—is the product of the late eighteenth century. There is nothing natural about it. Rather, like the whole world for Nietzsche (the great philosophical influence on Foucault), sexuality is "a sort of artwork."

Thus, from a variety of perspectives, the comfortable notion is shaken that man is man and woman is woman and that the historian's task is to find out what they did, what they thought, and what was thought about them. That "thing," sex, about which people had beliefs seems to crumble. But the flesh, like the repressed, will not long allow itself to remain in silence. The fact that we become human in culture, Jeffrey Weeks maintains, does not give us license to ignore the body: "It is obvious that sex is something more than what society designates, or what naming makes it." The body reappears even in the writings of those who would turn attention to language, power, and culture. (Foucault, for example, longs for a nonconstructed utopian space in the flesh from
ticular forms of suffering and particular forms of the body, however the body is understood. The fact that pain and injustice are gendered and correspond to corporeal signs of sex is precisely what gives importance to an account of the making of sex.

Moreover, there has clearly been progress in understanding the human body in general and reproductive anatomy and physiology in particular. Modern science and modern women are much better able to predict the cyclical likelihood of pregnancy than were their ancestors; menstruation turns out to be a different physiological process from hemorrhoideal bleeding, contrary to the prevailing wisdom well into the eighteenth century, and the testes are histologically different from the ovaries. Any history of a science, however much it might emphasize the role of social, political, ideological, or aesthetic factors, must recognize these undeniable successes and the commitments that made them possible.46

Far from denying any of this, I want to insist upon it. My particular Archimedean point, however, is not in the real transcultural body but rather in the space between it and its representations. I hold up the history of progress in reproductive physiology—the discovery of distinct germ products, for example—to demonstrate that these did not cause a particular understanding of sexual difference, the shift to the two-sex model. But I also suggest that theories of sexual difference influenced the course of scientific progress and the interpretation of particular experimental results. Anatomists might have seen bodies differently—they might, for example, have regarded the vagina as other than a penis—but they did not do so for essentially cultural reasons. Similarly, empirical data were ignored—evidence for conception without orgasm, for example—because they did not fit into either a scientific or a metaphysical paradigm.

Sex, like being human, is contextual. Attempts to isolate it from its discursive, socially determined milieu are as doomed to failure as the philosopher's search for a truly wild child or the modern anthropologist's efforts to filter out the cultural so as to leave a residue of essential humanity. And I would go further and add that the private, enclosed, stable body that seems to lie at the basis of modern notions of sexual difference is also the product of particular, historical, cultural moments. It too, like opposite sexes, comes into and out of focus.

My general strategy in this book is to implicate biology explicitly in the interpretive dilemmas of literature and of cultural studies generally. "Like the other sciences," writes François Jacob, winner of the 1965 Nobel Prize for medicine,

biology today has lost its illusions. It is no longer seeking for truth. It is building its own truths. Reality is seen as an ever-unstable equilibrium. In the study of living beings, history displays a pendulum movement, swinging to and fro between the continuous and the discontinuous, between structure and function, between the identity of phenomena and the diversity of being.47

The instability of difference and sameness lies at the very heart of the biological enterprise, in its dependence on prior and shifting epistemological, and one could add political, grounds. (Jacob is of course not the first to make this point. Auguste Comte, the guiding spirit of nineteenth-century positivism, confessed that "there seems no sufficient reason why the use of scientific fictions, so common in the hands of geometers, should not be introduced into biology."48 And Émile Durkheim, one of the giants of sociology, argued that "we buoy ourselves up with a vain hope if we believe that the best means of preparing for the coming of a new science is first patiently to accumulate all the data it will use. For we cannot know what it will require unless we have already formed some conception of it."49 Science does not simply investigate, but itself constitutes, the difference my book explores: that of woman from man. (But not, for reasons discussed below, man from woman.)

Literature, in a similar way, constitutes the problem of sexuality and is not just its imperfect mirror. As Barbara Johnson argues, "it is literature that inhabits the very heart of what makes sexuality problematic for us speaking animals. Literature is not only a thwarted investigator but also an incorrigible perpetrator of the problem of sexuality."50 Sexual difference thus seems to be already present in how we constitute meaning; it is already part of the logic that drives writing. Through "literature," representation generally, it is given content. Not only do attitudes toward sexual difference "generate and structure literary texts," texts generate sexual difference.51

Johnson is careful to restrict the problem of sexuality to "us speaking animals," and thus to rest content that, among dumb animals and even among humans outside the symbolic realm, male is manifestly the opposite sex from female. But clarity among the beasts bespeaks only the very
limited purposes for which we generally make such sexual distinctions. It matters little if the genitals of the female elephant (fig. 1) are rendered to look like a penis because the sex of elephants generally matters little to us; it is remarkable and shocking if the same trick is played on our species, as was routine in Renaissance illustrations (figs. 15-17). Moreover, as soon as animals enter some discourse outside breeding, zoo keeping, or similarly circumscribed contexts, the same sort of ambiguities arise as when we speak about humans. Then the supposedly self-evident signs of anatomy or physiology turn out to be anything but self-evident. Questions of ultimate meaning clearly go well beyond such facts. Darwin in 1861 lamented: "We do not even know in the least the final cause of sexuality; why new beings should be produced by the union of the two sexual elements, instead of by a process of parthenogenesis ... The whole subject is as yet hidden in darkness." And still today the question of why egg and sperm should be borne by different, rather than the same, hermaphroditic, creature remains open.

Darkness deepens when animals enter into the orbit of culture; their sexual transparency disappears. The hare, which figures prominently in so much myth and folklore, was long thought to be capable of routine sex change from year to year and thus inherently androgynous. Or, as the more learned would have it, the male hare bears young on occasion. The hyena, another animal with prolific cultural meanings, was long thought to be hermaphroditic. The cassowary, a large, flightless, ostrich-like, and, to the anthropologist, epicene bird, becomes to the male Sambian tribesman a temperamental, wild, masculinized female who gives birth through the anus and whose feces have procreative powers; the bird becomes powerfully bisexual. Why, asks the ethnographer Gilbert Herdt, do people as astute as the Sambia "believe" in anal birth? Because anything one says, outside of very specific contexts, about the biology of sex, even among the brute beasts, is already informed by a theory of difference or sameness.

Indeed, if structuralism has taught us anything it is that humans impose their sense of opposition onto a world of continuous shades of difference and similarity. No oppositional traits readily detected by an outsider explain the fact that in nearly all of North America, to use Lévi-Strauss's example, sagebrush, Artemisia, plays "a major part in the most diverse rituals, either by itself or associated with and at the same time, as the opposite of other plants: Solidaga, Chrysothamnus, Gutierrezia." It stands for the feminine in Navaho ritual whereas Chrysothamnus stands for the masculine. No principle of opposition could be subtler than the tiny differences in leaf serrations that come to carry such enormous symbolic weight.

It should be clear by now that I offer no answer to the question of how bodies determine what we mean by sexual difference or sameness. My claims are of two sorts. Most are negative: I make every effort to show that no historically given set of facts about "sex" entailed how sexual difference was in fact understood and represented at the time, and I use this evidence to make the more general claim that no set of facts ever entails any particular account of difference. Some claims are positive: I point to ways in which the biology of sexual difference is embedded in other cultural programs.

Chapter 2 is about the oxymoronic one-sex body. Here the boundaries between male and female are primarily political; rhetorical rather than biological claims regarding sexual difference and sexual desire are primary. It is about a body whose fluids—blood, semen, milk, and the various excrements—are fungible in that they turn into one another and whose processes—digestion and generation, menstruation and other
bleeding—are not so easily distinguished or so easily assignable to one sex or another as they became after the eighteenth century. This “one flesh,” the construction of a single-sexed body with its different versions attributed to at least two genders, was framed in antiquity to valorize the extraordinary cultural assertion of patriarchy, of the father, in the face of the more sensibly evident claim of the mother. The question for the classical model is not what it explicitly claims—why woman?—but the more troublesome question—why man?

Chapter 3 is the first of two chapters that examine explicitly the relationship between a model of sexual difference and scientific learning. It shows how the one-flesh model was able to incorporate new anatomical knowledge and new naturalistic forms of representation. Chapter 4 concentrates on the cultural interests that various writers had in what seems to us a manifestly counterintuitive model of sexual difference. It exposes the immense pressures on the one-sex model from the existence of two genders, from the new political claims of women, and from the claims of heterosexuality generally. I suggest through readings of legal, juridical, and literary texts that it is sustained by powerful notions of hierarchy worked and how the body expresses its cultural meanings. At stake for the men involved in this struggle was nothing less than the suppression of the basis for a genuine, other, sex.

Chapter 5 gives an account of the breakdown of the one-sex model and the establishment of two sexes. Like Chapter 3 it maintains that these constructions were not the consequence of scientific change but rather of an epistemological and a social-political revolution. Again, the negative argument—that the scientific is not natural and given—is more forcefully put than the affirmative, in part because I am reluctant to frame my story in terms of a specific set of causes for the increasing prominence of the two-sex model. My strategy instead is to suggest, by example, the ways in which particular struggles and rhetorical situations made men and women talk as if there were now two sexes. These contexts were of course the results of new social and political developments, but I do not draw out the connections in great detail. More detailed studies are needed to create a locally nuanced account of “Politics, Culture, and Class in the Eighteenth- and Nineteenth-Century Body.”

Chapter 6 functions much like Chapter 4 in that it engages the science of sex—two this time—with the demands of culture. I show specifically how cornerstones of corporeally based sexes were themselves deeply implicated in the politics of gender. But in this chapter I also present evidence for the continued life of the one-sex model. It lived on even in the midst of the most impassioned defense of two sexes, of ineradicable “organic difference . . . proved by all sound biology, the biology of man and of the entire animal species . . . proved by the history of civilization, and the entire course of human evolution.” The specter of one sex remains: the “womanliness of woman” struggles against “the anarchic assertors of the manliness of man.” In some of the rhetoric of evolutionary biology, in the Marquis de Sade, in much of Freud, in slasher films, indeed in any discussion of gender, the modern invention of two distinct, immutable, and incommensurable sexes turns out to be less dominant than promised. (Here I differ from Foucault, who would see one episteme decisively, once and for all, replacing another.) I illustrate the openness of nineteenth-century science to either a two- or a one-sex model with a discussion first of how denunciations of prostitution and masturbation reproduced an earlier discourse of the unstable individual body, open and responsive to social evil, and then of Freud’s theory of clitoral sexuality in which efforts to find evidence of incommensurable sexes founders on his fundamental insight that the body does not of itself produce two sexes.

I have not written this book as an explicit attack on the current claims of sociobiology. But I hope it is taken up by those engaged in that debate. A historian can contribute little to the already existing critical analysis of particular experiments purporting to demonstrate the biological basis of gender distinctions or to lay bare the hormones and other chemicals that are meant to serve as a sort of ontological granite for observable sexual differences. But I can offer material for how powerful prior notions of difference or sameness determine what one sees and reports about the body. The fact that the giants of Renaissance anatomy persisted in seeing the vagina as an internal version of the penis suggests that almost any sign of difference is dependent on an underlying theory of, or context for, deciding what counts and what does not count as evidence.

More important, though, I hope this book will persuade the reader that there is no “correct” representation of women in relation to men and that the whole science of difference is thus misconceived. It is true that there is and was considerable and often overtly misogynist bias in much biological research on women; clearly science has historically worked to “rationalize and legitimize” distinctions not only of sex but also of race.
and class, to the disadvantage of the powerless. But it does not follow
that a more objective, richer, progressive, or even more feminist science
would produce a truer picture of sexual difference in any culturally
meaningful sense. (This is why I do not attempt to offer a history of more or
less correct, or more or less misogynistic, representations.) In other
words, the claim that woman is what she is because of her uterus is no
more, or less, true than the subsequent claim that she is what she is be-
cause of her ovaries. Further evidence will neither refute nor affirm these
patently absurd pronouncements because at stake are not biological ques-
tions about the effects of organs or hormones but cultural, political ques-
tions regarding the nature of woman.

I return again and again in this book to a problematic, unstable female
body that is either a version of or wholly different from a generally un-
problematic, stable male body. As feminist scholars have made abun-
dantly clear, it is always woman's sexuality that is being constituted;
woman is the empty category. Woman alone seems to have "gender" since
the category itself is defined as that aspect of social relations based on
difference between sexes in which the standard has always been man.
"How can one be an enemy of woman, whatever she may be?" as the
Renaissance physician Paracelsus put it; this could never be said of man
because, quite simply, "one" is male. It is probably not possible to write
a history of man's body and its pleasures because the historical record was
created in a cultural tradition where no such history was necessary.

But the modern reader must always be aware that recounting the his-
tory of interpreting woman's body is not to grant the male body the
authority it implicitly claims. Quite the contrary. The record on which I
have relied bears witness to the fundamental incoherence of stable, fixed
categories of sexual dimorphism, of male and/or female. The notion, so
powerful after the eighteenth century, that there had to be something
outside, inside, and throughout the body which defines male as opposed
to female and which provides the foundation for an attraction of oppos-
ite is entirely absent from classical or Renaissance medicine. In terms of
the millennial traditions of western medicine, genitals came to matter as
the marks of sexual opposition only last week. Indeed, much of the evi-
dence suggests that the relationship between an organ as sign and the
body that supposedly gives it currency is arbitrary, as indeed is the rela-
tionship between signs. The male body may always be the standard in the
game of signification, but it is one whose status is undermined by its
unrepentant historical inconstancy.

Although some tensions inform this book, others do not. I have given
relatively little attention to conflicting ideas about the nature of woman
or of human sexuality. I have not even scratched the surface of a context-
ual history of reproductive anatomy or physiology; even for scientific
problems that I explore in some detail, the institutional and professional
matrix in which they are embedded is only hurriedly sketched. There is
simply too much to do in the history of biology, and too much has al-
ready been done on the condition-of-woman question or the history of
ideas about sex, for any one person to master.

I want to lay claim to a different historical domain, to the broad dis-
cussive fields that underlie competing ideologies, that define the terms
of conflict, and that give meaning to various debates. I am not committed
to demonstrating, for example, that there is a single, dominant "idea of
woman" in the Renaissance and that all others are less important. I have
no interest in proving conclusively that Galen is more important than
Aristotle at any one time or that a given theory of menstruation was he-
gemonic between 1840 and 1920. Nor will I be concerned with the gains
and losses in the status of women through the ages. These are issues I
must ask my readers to decide for themselves, whether the impressions
they derive from these pages fit what they themselves know of the vast
spans of time that I cover. My goal is to show how a biology of hierarchy
in which there is only one sex, a biology of incommensurability between
two sexes, and the claim that there is no publicly relevant sexual difference
at all, or no sex, have constrained the interpretation of bodies and the
strategies of sexual politics for some two thousand years.

Finally, I confess that I am saddened by the most obvious and persist-
tent omission in this book: a sustained account of experience in the body.
Some might argue that this is as it should be, and that a man has nothing
of great interest or authenticity to say about the sexual female body as it
feels and loves. But more generally I have found it impossible in all but
isolated forays into literature, painting, or the occasional work of theo-
logy to imagine how such different visions of the body worked in specific
contexts to shape passion, friendship, attraction, love. A colleague
pointed out to me that he heard Mozart's Così fan tutte with new ears
after reading my chapters about the Renaissance. I have felt a new poi-
Two

Destiny Is Anatomy

Turn outward the woman's, turn inward, so to speak, and fold double the man's [genital organs], and you will find the same in both in every respect.

Galen of Pergamum (c. 130–200)

This chapter is about the corporeal theatrics of a world where at least two genders correspond to but one sex, where the boundaries between male and female are of degree and not of kind, and where the reproductive organs are but one sign among many of the body's place in a cosmic and cultural order that transcends biology. My purpose is to give an account, based largely on medical and philosophical literature, of how the one-sex body was imagined; to stake out a claim that the one-sex/one-flesh model dominated thinking about sexual difference from classical antiquity to the end of the seventeenth century; and to suggest why the body should have remained fixed in a field of images hoary already in Galen's time, while the gendered self lived a nuanced history through all the immense social, cultural, and religious changes that separate the world of Hippocrates from the world of Newton.

Organs and the mole's eyes

Nothing could be more obvious, implied the most influential anatomist in the western tradition, than to imagine women as men. For the dullard who could not grasp the point immediately, Galen offers a step-by-step thought experiment:

Think first, please, of the man's [external genitalia] turned in and extending inward between the rectum and the bladder. If this should happen, the scrotum would necessarily take the place of the uterus with the testes lying outside, next to it on either side.
and hence less potent version of the canonical body, then distinct organic, much less genital, landmarks mattered far less than the metaphysical hierarchies they illustrated. Claims that the vagina was an internal penis or that the womb was a female scrotum should therefore be understood as images in the flesh of truths far better secured elsewhere. They are another way of saying, with Aristotle, that woman is to man as a wooden triangle is to a brazen one or that woman is to man as the imperfect eyes of the mole are to the more perfect eyes of other creatures.\textsuperscript{25} Anatomy in the context of sexual difference was a representational strategy that illuminated a more stable extracorporeal reality. There existed many genders, but only one adaptable sex.

**Blood, milk, fat, sperm**

In the blood, semen, milk, and other fluids of the one-sex body, there is no female and no sharp boundary between the sexes. Instead, a physiology of fungible fluids and corporeal flux represents a different register the absence of specifically genital sex. Endless mutations, a cacophonous ringing of changes, become possible where modern physiology would see distinct and often sexually specific entities.

Ancient wisdom held, for example, that sexual intercourse could alleviate conditions—mopish, sluggish behavior—caused by too much phlegm, the moist clammy humor associated with the brain: “semen is the secretion of an excrement and in its nature resembles phlegm.”\textsuperscript{26} (This already hints of the idea that conception is the male having an idea in the female body.) But more to the point here, ejaculation of one sort of fluid was thought to restore a balance caused by an excess of another sort because seminal emission, bleeding, purging, and sweating were all forms of evacuation that served to maintain the free-trade economy of fluids at a proper level. A Hippocratic account makes these physiological observations more vivid by specifying the anatomical pathways of interconversion; sperm, a foam much like the froth on the sea, was first refined out of the blood; it passed to the brain; from the brain it made its way back through the spinal marrow, the kidneys, the testicles, and into the penis.\textsuperscript{27}

Menstrual blood, a plethora or leftover of nutrition, is as it were a local variant in this generic corporeal economy of fluids and organs. Pregnant women, who supposedly transformed otherwise superfluous food into
nourishment for the fetus, and new mothers, who nursed and thus needed to convert extra blood into milk, did not have a surplus and thus did not menstruate. "After birth," says the omniscient Isidore, passing on one millennium of scholarship to the next, "whatever blood has not yet been spent in the nourishing of the womb flows by natural passage to the breasts, and whitening [hence lac, from the Greek λευκός (white), Isidore says] by their virtue, receives the quality of milk."28 So too obese women (they transformed the normal plethora into fat), dancers (they used up the plethora in exercise), and women "engaged in singing contests" (in their bodies "the material is forced to move around and is utterly consumed") did not menstruate either and were thus generally infertile.29 The case of singers, moreover, illustrates once again the extent to which what we would take to be only metaphoric connections between organs were viewed as having causal consequences in the body as being real. Here the association is one between the throat or neck through which air flows and the neck of the womb through which the menses pass; activity in one detracts from activity in the other. (In fact, metaphorical connections between the throat and the cervix/vagina or buccal cavity and pudenda are legion in antiquity and still into the nineteenth century, as fig. 2 suggests. Put differently, a claim that is made in one case as metaphor—the emissions that both a man and a woman deposit in front of the neck of the womb are drawn up "with the aid of breath, as with the mouth or nostrils"—has literal implications in another: singers are less likely to menstruate.30)

Although I have so far only described the economy of fungible fluids with respect to sperm and menstrual blood, seemingly gendered products, it in fact transcended sex and even species boundaries. True, because men were hotter and had less blood left over, they did not generally give milk. But, Aristotle reports, some men after puberty did produce a little milk and with consistent milking could be made to produce more (HA 3.20.522a19–22). Conversely, women menstruated because they were cooler than men and hence more likely at certain ages to have a surplus of nutriment. But, even so, menstruation in women was thought to have functional, nonreproductive, equivalents, which allowed it to be viewed as part of a physiology held in common with men. Thus, Hippocrates held, the onset of a nosebleed, but also of menstruation, was an indication that a fever was about to break; just as nosebleeding was a prognostic sign that blocked courses, amenorrhea, would soon resolve. Conversely, a woman vomiting blood would stop if she started to menstruate.31 The same sort of substitution works with sweat: women menstruate less in the summer and more in winter, said Soranus, because of the different amounts of evaporation that take place throughout the body in warm and cold weather. The more perspiration, the less menstrual bleeding.32 What matters is losing blood in relation to the fluid balance of the body, not the sex of the subject or the orifice from which it is lost. Hence, argued Aretaeus the Cappadocian, if melancholy appears after "the suppression of the catamenial discharge in women," or after "the hemorrhoidal flux in men, we must stimulate the parts to throw off their accustomed evacuation." Women, said Aristotle, do not suffer from hemorrhoids or nosebleeds as much as men do, except when their menstrual discharges are ceasing; conversely, the menstrual discharge is slight in women with hemorrhoids or varicose veins presumably because surplus blood finds egress by these means.33

The complex network of interconvertibility implicit in the physiology of one sex is even wider than I have suggested and encompasses flesh as well as fluid. Aristotle, for example, finds confirmation for the common
residual nature of sperm and menstrual fluid in the observation that fat
creatures of both sexes are “less spermatic” (spermatikos) than lean ones.
Since “fat also, like semen, is a residue, and is in fact concocted blood,”
the bipedal men and women have less left over to be released in orgasm or as
catamenia. Lean men, on the other hand, produce more semen than fat
men and for the same general reason that humans produce proportionally
more semen and more menstrual fluid than other animals: lean men do not use up nutrient for fat; humans retain, as a surplus, material that in
animals goes into their horns and hair.

This sort of analysis can be extended indefinitely. Fair-complexioned
men and women ejaculate more copiously than darker ones, Aristotle
says, without even bothering to make explicit the assumption that this is
because the latter are generally more hirsute; those on a watery and pungent
diet discharge more than they would on a dry bland diet (HA 7.2.583a10–14). Both men and women are tired after ejaculation, not
because the quantity of material emitted is so great but because of its
quality: it is made from the purest part of the blood, from the essence of
life (GA 1.18.725b6–7).

If, as I have been arguing, the reproductive fluids in the one-sex model
were the higher stages in the concoction of food—much like the
lighter-weight products in the fractional distillation of crude oil—then
the male and female seed cannot be imagined as sexually specific, morphologically distinct, entities, which is how they would come to be
understood after the discovery of little creatures in the semen and of what
was presumed to be the mammalian egg in the late seventeenth century.
Instead, the substances ejaculated by the “two sexes” in the one-sex body
were hierarchically ordered versions of one another according to their
supposed power.

The difference between so-called two-seed and one-seed theories—Galen
versus Aristotle—is therefore not an empirical question that could be
resolved by reference to observable facts. Even in Aristotle’s one-seed
theory, sperma and catamenia refer to greater or lesser refinements of an
ungendered blood, except when they are used as ciphers for the male and
female “principles.” What one sees, or could ever see, does not really
matter except insofar as the thicker, whiter, frottier quality of the male
semen is a hint that it is more powerful, more likely to act as an efficient
cause, than the thinner, less pristinely white, and more watery female
ejaculate or the still red, even less concocted, menstrua. Like reproductive
organs, reproductive fluids turn out to be versions of each other; they are

the biological articulation, in the language of a one-sex body, of the politics
to reify the role of问询. This view is the very one that Aristotle himself
developed, and it is precisely this that makes it so compelling. The Hippocratic
writer argues this point vividly and without the philosophical complexity we
find in Aristotle’s so-called one-seed theory. Perhaps, if we accept the views of Aline Rousseau, he even speaks for the
otherwise silenced empirical wisdom of women. Hippocrates argues for
generalize, the view that each part of the body of each parent renders up
some aspect of itself; that the representatives of the various parts form a
reproductive fluid or seed; and that conception consists of a blending, in
various proportions and strengths, of these germinal substances. Hippocrates
abandons any effort to attribute strong or weak seed respectively to
actual males or females. Although males must originate from stronger
sperm, “the male being stronger than the female,” both are capable of
producing more or less strong seed. What each emits is the result of
any essential characteristic of male or female, but of an internal balance
between each sort of seed: “what the woman emits is sometimes stronger,
sometimes weaker; and this applies also to what the man emits.”68
Hippocrates insists on this point by repeating the claim and generalizing it to
animals: “The same man does not invariably emit the strong variety of
sperm, nor the weak invariably, but sometimes the one and sometimes the
other; the same is true in the woman’s case.” This explains why any
given couple produces both male and female offspring as well as stronger
and weaker versions of each; likewise for the beasts.

If both partners produce strong sperm, a male results; if both produce
weak sperm, a female is born; and if in one partner the battle has gone to
the weak and in the other to the strong, then the sex of the offspring is
determined by the quantity of the sperm produced. A greater quantity of
weak sperm, whether produced by the male or the female, can overwhelm
a lesser quantity of strong sperm, of whatever origin, in the second round
when the two meet in front of the uterus for renewed combat. Hippocrates
is at pains to emphasize the fluidity of the situation and the inter-
penetration of male and female. The contest for supremacy between the

just as though one were to mix together beeswax and suet, using a larger
quantity of the suet than of the beeswax, and melt them together over a
fire. While the mixture is still fluid, the prevailing character of the mixture
is not apparent: only after it solidifies can it be seen that the suet prevails
quantitatively over the wax. And it is just the same with the male and female
forms of the sperm.
Male and female “forms” of sperm thus correspond neither to the genital configuration of their source nor to that of the new life they will create, but rather to gradations on a continuum of strong to weak.41

I think that, if pushed on the point, the Hippocratic writer would have to admit that there was something uniquely powerful about male seed, the fluid that comes from an actual male, because otherwise he would have no answer to the question with which two-seed theorists were plagued for millennia: if the female has such powerful seed, then why can she not engender within herself alone; who needs men? The Hippocratic texts, however, resolutely resist correlating the gender of the seed, its strength or weakness, with the sex of the creature that produced it. Instead, in their version of the one-sex economy of fluids, the more potent seed is by definition the more male, wherever it originated.

For Galen too each parent contributes something that shapes and vivifies matter, but he insists that the female parent’s seed is less powerful, less “informing” than the male parent’s because of the very nature of the female. To be female means to have weaker seed, seed incapable of engendering, not as an empirical but as a logical manner. “Forthwith, of course, the female must have smaller, less perfect testes, and the semen generated in them must be scantier, colder, and wetter (for these things too follow of necessity from the deficient heat)” (UP 2.631). Thus, in contrast to Hippocrates, Galen holds that the quality of the respective seeds themselves follows from the hierarchy of the sexes. Man’s seed is always thicker and hotter than a woman’s for the same reason that the penis is extruded and not, like the uterus and the mole’s eyes, left undeveloped inside the body: humans are the most perfect animal, and man is more perfect than woman because of an “excess of heat.” In opposition, however, to what he took to be Aristotle’s view, Galen insisted that women did produce semen, a true generative seed. If this were not the case, he asks rhetorically, why would they have testicles, which they manifestly do? And if they had no testicles (orcheis) they would not have the desire for intercourse, which they manifestly have.42 In other words, the female seed, like woman herself, “is not very far short of being perfectly warm” (UP 2.630).

Male and female semen, more and less refined fluids, thus stand in the same relationship to blood that penis and vagina stand to genital anatomy, extruded and still-inside organs. As the medieval Arabic physician Avicenna (ibn-Sina, 980–1037) puts it in his discussion of these Galenic texts, “the female seed is a kind of menstrual blood, incompletely digested and little converted, and it is not as far away from the nature of blood (a virtute sanguinis) as is the male seed.”43 He assimilates digestion and reproduction, food, blood, and seed into a single general economy of fluids driven by heat. The female in the one-sex model lacks the capacity, the vital heat, to convert food to the very highest level: sperm. But she comes close.

Aristotle and the Aristotelian “one-seed” tradition, with its radical distinction between the male and female generative materials (gonimata), would seem to make the Galenic intermediate position impossible and would thus also seem to provide a basis in the body for two biologically distinct and incommensurable sexes, much in the way that egg and sperm would come to function in theories like Geddes’ in the nineteenth century. Males, in Aristotle’s account, produce sperma, which is the efficient cause in generation, and females do not. Females provide instead the catamenia, which is the material cause and thus of an entirely different nature. But this a priori formal distinction entirely exhausts what Aristotle means by sperma and catamenia. Just as the bodies of males and females fail to provide fixed anatomical correlates for his theory of generative causality, so too the reproductive fluids “in the world” do not sustain a radical two-sex account of sexual difference. Nor would Aristotle want them to.

Obviously Aristotle and his contemporaries could tell semen from menstrual blood. Men and sanguineous male animals, they knew, generally emitted a visible, palpable substance that was white because it was foam composed of invisible bubbles and thick because it was a compound of water mixed with breath (pneuma), the tool through which the male principle worked. Although Aristotle usually referred to this stuff as sperma, its distinguishing characteristics were not in principle aspects of the seed itself.44 The ejaculate, he makes absolutely explicit, was but the vehicle for the efficient cause, for the sperma, which worked its magic like an invisible streak of lightning. As experience proved, it ran out of or evaporated from the vagina; it no more entered into the catamenia, into what would become the body of the embryo, than any active agent enters into passive matter when one thing is made from two. After all, no part of the carpenter merges with the bed he crafts, nor does the swordsman’s art enter the sword he is fashioning, nor does rennet or fig juice become part of the milk they curdle into cheese. Indeed the efficient cause, the
artisanal, informing principle, can apparently be carried on the breeze alone, as with the Cretan mares who are “wind impregnated.”

All of Aristotle’s metaphors discount a physically present ejaculate; sperma as artisan works in a flash, more like a genie than like a shoemaker who sticks to his last. His images bring us back to the constellation of phlegm/brain/sperm: conception is for the male to have an idea, an artistic or artisanal conception, in the brain-uterus of the female.

But the female, the material, contribution to generation is only slightly more material and thus recognizable by the physical properties of menstrual blood. Aristotle is at pains to point out that catamenia, the menstrual residue itself, is not to be equated with the actual blood that one sees: “the greater part of the menstrual fluid is useless, being fluid” (GTV 2.4.739a9). But he leaves the relationship between the catamenia, wherein the sperma works its magic, and anything visible—the “useless” menstrual discharge or the fluid that moistens the vagina during intercourse—unexplored largely because it does not matter in a world in which claims about the body serve primarily as illustrations of a variety of higher truths.

His dominant image is of a hierarchy of blood: “The secretion of the male and the menses of the female are of a sanguineous nature.” Semen from men who have coitus too often reverts to its earlier bloody state; semen in boys and often in older men is, like the catamenia, unable to impart movement to matter. For Aristotle, therefore, and for the long tradition founded in his thought, the generative substances are interconvertible elements in the economy of a single-sex body whose higher form is male. As physiological fluids they are not distinctive and different in kind, but the lighter shades of biological chiaroscuro drawn in blood.

All of this evidence suggests that in the construction of the one-sex body the borders between blood, semen, other residues and food, between the organs of reproduction and other organs, between the heat of passion and the heat of life, were indistinct and, to the modern reader, almost unimaginable—indeed terrifyingly—porous. “Anyone who has intercourse around midnight,” warns a text attributed to Constantinus Africanus, “makes a mistake.” Digest (convect) food first before straining the body to give the final concoction to the seed. Fifteen hundred years after Aristotle and a thousand after Galen, Dante in the Purgatorio still plays on the fungibility of the body’s fluids and the affinities of its heats. “Undrunk” blood, perfect like a dish (alimento) that is sent from the table, is redistilled by the heat of the heart, sent down to the genitals, from which “it sprays in nature’s vessel, on another’s blood.”

The Secrets of Women, compiled from ancient lore during the later Middle Ages and still popular in the eighteenth century, speaks of the appetite for intercourse as a direct result of the buildup of residue from daily food. Menstrual refined from the blood heats up a woman’s vulva through an “abundance of matter” and causes her greatly to desire coition.

The fluid economy of the one-sex body thus engenders the desires and the heat through which it will be perpetuated. But more generally I hope it is becoming clear that the physiology and even the anatomy of generation are but local instances of a way of talking about the body very different from our own. Visible flesh and blood cannot be regarded as the stable “real” foundation for cultural claims about it. Indeed, the interpretive problem is understanding the purchase of “real” and the degree to which biology is only the expression of other and more pervasive truths.

Orgasm and desire

“I must now tell why a great pleasure is coupled with the exercise of the generative parts and a raging desire precedes their use,” Galen wrote (UP 2.640). However else orgasm might be tempered to fit the cultural needs of the private and the public body, it signaled the unsocialized body’s capacity to generate. A basically matter-of-fact, specifically genital urge led to a grander, systemic heating of the body until it was hot enough to concoct the seeds of new life. Serous residues, exquisitely sensitive skin, and friction were the proximal causes of sexual delight and desire; “that the race may continue incorruptible forever” was their ultimate purpose. The process of generation might differ in its nuances as the vital heats, the seeds, and the physical qualities of the substances being ejaculated differed between the sexes—but libido, as we might call it, had no sex.

There was, of course, the age-old issue of whether men or women enjoyed the pleasures of Venus more, a question posed most famously in Ovid, who offers an ambiguous answer. (Ovid’s account would become a regular anecdote in the professed repertory, told to generations of medieval and Renaissance students to spice up medical lectures.) True, Tiresias, who had experienced love as both a man and a woman, was blinded by Juno for agreeing with Jupiter that women enjoyed sex more. But his qualifications for judging already suggest the slipperiness of the question: he knew either one or the other, or both, aspects of the femi-
nine Venus rather than of the masculine amor. And the story of his "mirror" metamorphosis from man to woman, the result of his striking two coapatating serpents, and back to man by striking them again eight years later, further undermines his authority on the sexual differentiation of pleasure. Snakes famously give no outward sign of their sex; they curl around one another in coition and reflect back and forth the most ambiguous and ungendered of images. Though differing perhaps in nuance, orgasm is orgasm in the one-sex body, Ovid's story seems to say.\textsuperscript{64}

A common neurology of pleasure in a common anatomy, it was thought, bore witness to this fact. Galen, for example, notes that "the male penis ... as well as the neck of the uterus and the other parts of the pudendum" are richly endowed with nerves because they need sensation during sexual intercourse and that the testes, scrotum, and uterus are poorly endowed because they do not. Animal dissections prove, he says, that the "genital areas," in common with the liver, spleen, and kidneys, have only small nerves while the pudenda have "more considerable ones." Even the skin of the relevant organs is more irritated by the "itch" of the flesh than would be the skin of the body's other parts. Given all these adaptations, it is no longer to be wondered at that the pleasure inherent in the parts there and the desire that precedes it are more vehement.\textsuperscript{65}

Aristotle too is at pains to point out that "the same part which serves for the evacuation of the fluid residue is also made by nature to serve in sexual congress, and this alike in male and female."\textsuperscript{66} Both sperma and catamenia generate heat in the genital regions, both put pressure on the sexual organs that are prepared to respond to their stimuli, though in the case of women's parts the heat seems to serve primarily to draw in semen, like a cupping vessel, and not to spur coition (GA 2.4.739b10).

"Semen" in this economy of pleasure is not only a generative substance but also, through its specific action on the genitals, one of the causes of libido. It is a serious, irritating humor that produces a most demanding itch in precisely that part of the body contrived by Nature to be hypersensitive to it.\textsuperscript{67} (Or in parts not contrived for it. The only ancient text to discuss the physical causes of passive homosexuality—the unnatural desire of the male to play the socially inferior role of woman by offering his anus for penetration—attributes it both to an excess of semen and to a congenital defect that shunts this excess to an inappropriate orifice, the anus, instead of allowing it to simply build up in the proper male organ.\textsuperscript{58}) Needless to say, great pleasure is to be had from scratching.

Orgasm thus dovetails nicely with the economy of fluids discussed in the previous section. One of Galen's arguments for the existence of a true female seed, for example, was its link to desire: it offered "no small usefulness in inciting the female to the sexual act and in opening wide the neck of the womb during coitus" (UP 2.643). He might actually have meant that it works like a penis. The part in question, extending out to the "pudenda" (the cervix, the vagina?) is, he says, sinewy and becomes straight during intercourse. He does not actually claim that the womb or vagina has an erection, but he describes the penis also as a sinewy, hollow body that becomes erect when it is filled with pneuma, with breath. And elsewhere still he develops the labia/foreskin association.\textsuperscript{69} The medieval commentator Albertus Magnus, writing still very much in this tradition almost a millennium later, makes the link explicit: a ventrissus, a gaseous, perhaps also liquid modification of vital heat, engorges the genital organs of both sexes.\textsuperscript{69} Organs and orgasms thus reflect one another in a common mirror.

Meanwhile Avicenna, the influential Arabic physician, broadens the discussion of the semen/pleasure nexus by explicitly connecting the anatomy and physiology of sexual pleasure in the one-sex body. An irritation of a common human flesh, caused by the acute quality or sheer quantity of sperm—again common to both sexes—engenders a specifically genital itch (pruritus) in the male's seminal vesicles and in the mouth of the womb (in ore matricis), which is relieved only by the chafing of intercourse or its equivalent. In this process the vagina, or in any case the cervix, becomes erect like the penis and is "thrust forward up against its mouth as though moving forward through the desire of attracting sperm."\textsuperscript{61} In the telling absence of a precise technical vocabulary, it is difficult to be sure exactly what part of a woman's genital organ is moving where; but the critical general claim, that irritation by a serious fluid loosely called sperm or semen causes women like men to experience desire and erection, is made unambiguously.

Intercourse in the one-sex body, however, is not construed primarily as a genital occasion. (Nor, of course, is desire purely the product of physical forces independent of the imagination.) The genitals, to be sure, are the most sensitive gauge of the presence of residues, the point of their release, and the immediate locus of pleasure, but coitus is a generalized friction culminating in a corporeal blaze. Intercourse and orgasm are the last stage, the whole body's final exaggerated huffing and puffing, violent,
stormlike agitation in the throes of producing the seeds of life. The rubbing together of organs, or even their imagined chafing in an erotic dream, causes warmth to diffuse via the blood vessels to the rest of the body. “Friction of the penis and the movement of the whole man cause the fluid in the body to grow warm,” the Hippocratic writer reports, “an irritation is set up in the womb which produces pleasure and heat in the rest of the body.” Then, as warmth and pleasure build up and spread, the increasingly violent movement of the body causes its finest part to be concocited into semen—a kind of foam—which bursts out with the uncontrolled power of an epileptic seizure, to use the analogy Galen borrowed from Democritus. Sexual heat is an instance of the heat that makes matter live and orgasm, which signals the explosive release of the seed and the heated pneuma, mimics the creative work of Nature itself.

Although specific interpretations of the male and female orgasm might differ, certain facts were generally not in dispute: both sexes experienced a violent pleasure during intercourse that was intimately connected with successful generation; both generally emitted something; pleasure was due both to the qualities of the substance emitted and to its rapid propulsion by “air”; the womb performed double duty in both emitting something and then drawing up and retaining a mixture of the two emissions. Of what deeper truths these facts spoke was much debated.

In the first place, the way orgasm was felt was added as evidence for particular embryological theories. Pangenists could argue as follows: “the intensity of pleasure of coition” proves that seed comes from every part of both partners because pleasure is greater if multiplied and that of orgasm is so great that it must result from something happening everywhere rather than just in a few places or in one sex only. But even if this reasoning was not universally accepted, most writers nevertheless regarded orgasm as a most weighty sign.

Why, asked an ancient text, did someone having sexual intercourse, and also a dying person, cast his or her eyes upward? Because the heat going out in an upward direction makes the eyes turn in the direction in which it itself is traveling. Conversely, sexual heat is the most intense form of the heat of life and so is the sign of successful generation. The early Christian writer Tertullian, for example, grounded his heterodox theory of the soul—its material origin, its entry into the body at the moment of conception, its departure at death—on the phenomenology of orgasm:

In a single impact of both parties, the whole human frame is shaken and foams with semen, in which the damp humor of the body is joined to the hot substance of the soul… I cannot help asking, whether we do not, in that very heat of extreme gratification when the generative fluid is ejected, feel that somewhat of our soul has gone out from us? And do we not experience a faintness and prostration along with a dimness of sight? This, then, must be the soul producing seed, which arises from the outdrip of the soul, just as that fluid is the body-producing seed which proceeds from the drainage of the flesh.

This “heat of extreme gratification,” however, is open to quite different secular interpretations. Lucretius regarded it as the blaze of battle in the war of sexual passion and conception. Young men are wounded by Cupid's arrow and fall in the direction of their injuries: “blood spurts out in the direction of their wound.” (In context this can only be semen, pure blood and not the blood of virginity.) Then both bodies are liquefied in rapture, and their ejaculates engage in a synecdochic version of the bodies’ combat. Offspring resemble both parents, for example, because “at their making the seeds that course through the limbs under the impulsion of Venus were dashed together by the collision of mutual passion in which neither party was master or mastered.”

In contrast to these positions, Aristotle wants to isolate orgasm from generation so as to protect the difference between efficient and material cause from an unduly world in which both sexes have orgasms that feel as if the same process had gone on in each of them. (As it turns out, Aristotle was right but not for the reasons he gave.) Thus for him it has to be “impossible to conceive without the emission of the male”, whether he feels pleasure during ejaculation is irrelevant. On the other hand women must be able to conceive “without experiencing the pleasure usual in such intercourse” because, by definition, conception is the work of the male emission on material in, or produced by, the body of the female. (Females usually do emit something but need not do so; there can be just enough catamenial residue resting in the womb for conception to take place but no extra that needs to be expelled.) Aristotle’s argument is asymmetrical here—males must emit, women need not feel—because he wants to stick to the essentials. It makes no difference how one interprets male pleasure; he must insist, however, that female pleasure—he discusses only humans in this regard—has no implication for his theory of the separation of
causes. His real interest is not in interpreting orgasm, but in not interpreting it.\textsuperscript{67}

It follows from this position that Aristotle would make no effort to ground two sexes in radically different passions and pleasures. Though women clearly could, in his view, conceive without feeling anything, he regarded this as a freak occurrence that resulted when “the part chance to be in heat and the uterus to have descended,” that is, when the womb and vagina were warmed by something other than the friction of intercourse and experienced their internal erection without concomitant sexual excitement. “Generally speaking,” he said, “the opposite is the case”; discharge by women is accompanied by pleasure just as it is in men, and “when this is so there is a readier way for the semen of the male to be drawn into the uterus.”\textsuperscript{68}

Aristotle’s many allusions to sexual pleasure are clearly not directed at distinguishing the orgasms of men and women but in keeping their similarities from being relevant. What he takes to be contingent sensations must not be construed as evidence for what he regards as metaphysical truths about generation. He denies that orgasm signals the production of generative substances even for the male; “the vehemence of pleasure in sexual intercourse,” he maintains, is not at all due to the production of semen but is the result instead of “a strong friction wherefore if this intercourse is often repeated the pleasure is diminished in the persons concerned.”\textsuperscript{69} The rhetorical force of this convoluted sentence is to stress the fading of feeling that comes from repetition. Elsewhere he says that pleasure arises not just from the emission of semen but from the pneuma, the breath, with which the generative substances explode. The point is simply that the phenomenological correlate of the generative act signifies nothing about its essence: there need be no seed, no efficient cause itself, for there to be an orgasm—as in young boys and old men who are not potent but nevertheless enjoy emission.\textsuperscript{70} Conversely, both men and women can emit their respective generative products and feel nothing, as in nocturnal wet dreams.\textsuperscript{71}

Whatever else orgasm might be or not be, mean or not mean, in various philosophical or theological contexts, it was at the very least understood as the \textit{summa voluptas} that normally accompanied the final blast of a body heated so hot that it expelled its generative essences or, in any case, was in a state to conceive. As such, it dwelled at the intersection of nature and civilization. On the one hand, orgasm was associated with unrestrained passion, warmth, melting, rendering, rubbing, exploding, as qualities of the individual body; aspects of the process of individual generation. On the other hand, orgasm also bore witness to the power of mortal flesh to reproduce its kind and thus assure the continuity of the body social. It and sexual pleasure generally were therefore cultural facts as well: the biology of conception was at the same time a model of filiation; the effective elimination of the distinct ontological category woman in the one-sex model and the doctrine that “like seeks like” made it difficult to explain heterosexuality upon which generation depended; the unruly body spoke of the unruly heart, of the fall from grace and weakness of the will; microcosmic creation mirrored the macrocosmic. Though the social and the corporeal cannot be disentangled, for purposes of exposition I will discuss orgasm first as the physicians confronted it—as a clinical problem of fertility or infertility—and then briefly turn in the next section to its relation to the demands of culture.

Physicians and midwives needed to know how to make men and women fertile—or more covertly, how to make them infertile—and how to tell if their therapeutic interventions were on the right track. If, as was commonplace, one believed that the body gave signs through its pleasures of the capacity to generate, then these could be read and the underlying processes manipulated to ensure or prevent conception. So, for example, Aetios of Amida, physician to Justinian who summarized for the emperor much ancient medical learning, interpreted a woman’s orgasmic shudder as a prognostic sign of conception. If “in the very coital act itself, she notes a certain tremor . . . she is pregnant” (Aetios also transmitted to the Christian world the old saw that women who are forced to have intercourse against their will are sterile while those “in love conceive very often.”) A woman’s shiver would not have been understood simply as a sign of her “semination”; it would register also the closing off of her womb at the appropriate time, after it had drawn up her seed mixed with that of the male.\textsuperscript{72}

Because the womb was thought to close after its orgasmic ejaculation, correct coital rhythm between partners during intercourse was thought critical for conception. If the woman is too excited before intercourse begins, the Hippocratic writer points out, she will ejaculate prematurely; then not only will her further pleasure diminish—a conclusion clearly based on men observing themselves—but also her womb will close and
she will not become pregnant. In exemplary reproductive heterosexual intercourse, then, both partners reached orgasm at the same time. Like a flame that flares when wine is sprinkled on it, the woman’s heat blazes most brilliantly when the male sperm is sprayed on it, Hippocrates rhapsodized. She shivers. The womb seals itself. And the combined elements for a new life are safely contained within.78

Orgasm in this account is thus common to both sexes but, like anatomy and the seeds themselves, it is hierarchically ordered. The man determines the nature of woman’s pleasure, which is more sustained but also, because of her lesser heat, less intense; the man feels a greater pang at the secretion of bodily fluids because a greater violence accompanies their being wrenched from his blood and flesh. Feelings mirror the cosmic order and at the same time suggest the sparkling of a candle in a mist of resinated wine.

Clinically, therefore, the problem is how to manipulate the pace of passion and the heat of the body so as to produce the desired results, conception or nonconception. Aristotle (or the pseudo-Aristotelian author of book 10) gives elaborate directions for determining in cases of barrenness which partner’s coital rhythms or corporeal environment was at fault. During intercourse the woman’s womb should become moist but “not often or excessively too moist,” lubricated as the mouth is with saliva when we are about to eat (once again a neck-of-the-womb/throat connection).74 More natural history: if a man ejaculates quickly and “a woman with difficulty as is often the case,” this prevents conception since women do contribute “something to the semen and to generation.” The observation that women and men who are barren with each other are “fertile when they meet with partners who keep pace with them during intercourse” provides this further evidence for the importance of suitable coital rhythms.75 Fifteen hundred years later, and in the very different context of prescriptions for birth control and abortion, the tenth-century Arabic writer Rhazes suggested that “if the man discharges sooner than the woman [discharges] she will not become pregnant.”76

Anything that might diminish coital heat could also cause infertility. Insufficient friction during intercourse, for example, could keep either partner from “seminating.” Thus Avicenna argues—again this is a commonplace notion—that the smallness of a man’s penis might cause a woman not to be “pleased by it . . . whereupon she does not emit sperm (sperma), and when she does not emit sperm a child is not made.” As if to raise male anxiety still further, he warns that unsatisfied women will remain in the thrall of desire and “have recourse to rubbing, with other women (ad frictio nem cum mulieribus), in order to achieve amongst themselves the fullness of their pleasures” and to rid themselves of the pressures of seminal residue.77

But even if the actual pang of a woman’s orgasm was regarded as a sign without the specific physiological referent of semination, sexual pleasure or at the very least desire was still regarded as part of the general care of the body that made reproduction, and hence the immortal body of the race, possible. Control of the sexual body was, as Foucault points out in his History of Sexuality, an aspect of more general dietary and other corporeal disciplines. Nowhere is this aspect of the domestication of sexual heat clearer than in Soranus’ Gynecology, which was written in the second century but which in various fragments and translations was one of the most widely cited texts until the late seventeenth century.

Soranus was not much interested in female ejaculation because he remained in doubt as to whether women actually contributed an active principle, a true seed. “It seems not to be drawn upon in generation since it is excreted externally,” he concluded cautiously. He nowhere denied the everyday existence of the sharp crisis of orgasm in women, but it was not of primary clinical concern. What mattered in women as in men, Soranus thought, was “the urge and appetite for intercourse.” Making the body ready for generation was like making it ready to put food to best use. The physiological affinity between generation and nutrition, eating and procreation, and in later Christian formulations between gluttony and lust, are nowhere clearer: “as it is impossible for the seed to be discharged by the male, in the same manner, without appetite it can not be conceived by the female.” A woman ingesting and a woman conceiving are engaged in analogous functions; food eaten when one has no appetite is not properly digested, and seed received by a woman when she has no sexual urge is not retained.78

But appetite alone is clearly not enough, since lecherous women feel desire all the time but are not always fertile. The body—Soranus is writing for midwives who ministered to ladies of the Roman governing class—must be properly cultivated to prepare for the civic task of procreation. They ought to be well rested, appropriately nourished, relaxed, in good order, and hot. Just as a Roman magistrate should eat only such foods as would maintain his sound judgment, so a woman should eat
appropriately before sex "to give the inner turbulence an impetus toward coition" and to be sure that her sexual urges were not diverted by hunger. She should be sober. A rubdown before intercourse would be indicated, since it "naturally aids the distribution of food, [and] also helps in the reception and retention of the seed." The fungibility of fluids, the equivalences of heat, are here registered in the social discipline of the body for procreation.

The demands of culture

The one-sex body would seem to have no boundaries that could serve to define social status. There are hirsute, virile women—the virago—who are too hot to procreate and are as bold as men; and there are weak, effeminate men, too cold to procreate and perhaps even womanly in wanting to be penetrated. "You may obtain physiognomic indications of masculinity and femininity," writes an ancient authority on interpreting the face and body, "from your subject's glance, movement, and voice, and then, from among these signs, compare with one another until you determine to your satisfaction which of the two sexes prevails." "Two sexes" here refers not to the clear and distinct kinds of being we might mean when we speak of opposite sexes, but rather to delicate, difficult-to-read shadings of one sex. There is, for example, no inherent gendering of desire and hence of coupling. It was in no way thought unnatural for mature men to be sexually attracted to boys. The male body, indeed, seemed equally capable of responding erotically to the sight of women as to attractive young men, which is why physicians forbade sufferers of satyrism (abnormal sexual craving characterized by unceasing erection and genital itch) to consort with either, regardless of their respective genital formations. Insofar as sexual attraction had a biological basis—as opposed to a basis in the naturalness of the social order and the imperative to keep it going—it seemed more genealogical than genital. In Aristophanes' story of the origins of men and women from two aboriginal, globular creatures who had either two male organs, two female organs, or one of each, only those who descended from the hermaphroditic form would "naturally" seek the "opposite" sex in order to achieve union. Otherwise, as Aristotle pointed out in the context of "what is natural is pleasant": like loves like, jackdaw loves jackdaw. In fact, reproductive heterosexual intercourse seems an afterthought. The original globular creatures had their genitals on the outside and "cast their seed and made children, not in one another but on the ground, like cicadas." In the new cut-up state they did nothing but longingly embrace their missing halves and thus died from hunger and idleness. Zeus hit upon the idea of relocating the genitals of one half of the new creatures, "and in doing so he invented interior reproduction, by men in women." This had the great advantage that when the new male embraced the new female, he could cast his seed into her and produce children and that when male embraced male, "they would at least have the satisfaction of intercourse, after which they could stop embracing, return to their jobs, and look after their other needs in life." Genitals are very hard to picture in the first part of this account and subsist only to make the best of a bad situation. "Love is born into every human being," the story concludes; "it tries to make one out of two and heal the wound in human nature." But what we would call the sex of that human being seems of only secondary importance.

But where honor and status are at stake, desire for the same sex is regarded as perverse, diseased, and wholly disgusting. A great deal more was written about same-sex love between men than between women because the immediate social and political consequences of sex between men was potentially so much greater. Relatively little was directly at stake in sex between women. Yet whether between men or between women, the issue is not the identity of sex but the difference in status between partners and precisely what was done to whom. The active male, the one who penetrates in anal intercourse, or the passive female, the one who is rubbed against, did not threaten the social order. It was the weak, womanly male partner who was deeply flawed, medically and morally. His very countenance proclaimed his nature: pathicus, the one being penetrated; circasius, the one who engages in unnatural lust; mollis, the passive, effeminate one. Conversely it was the tribade, the woman playing the role of the man, who was condemned and who, like the mollis, was said to be the victim of a wicked imagination as well as an excess and misdirection of semen. The actions of the mollis and the tribade were thus unnatural not because they violated natural heterosexualit y but because they played out—literally embodied—radical, culturally unacceptable reversals of power and prestige.

Similarly, when power did not matter or when a utopian sharing of political responsibility between men and women is being imagined, their respective sexual and reproductive behavior is stripped of meaning as
Notes

1. Of Language and the Flesh


4. Unconscious conception, however, was not regarded as impossible. There is a folklore tradition on this theme that would be worth exploring. Lot, it will be recalled, was so drunk when he begat children by his two daughters that the first that "he knew not when she lay down or when she arose" (Genesis 19:31–35). In the Italian tale "The Sleeping Queen," the youngest son of the King of Spain finds "a maiden of angelic beauty" who had clearly been "put under a spell while she slept." He undresses, gets into bed with her, and passes "a delightful night with her without her giving any sign she knew he was there." He leaves a note when he departs; she is delivered of a boy nine months later. See Italo Calvino, *Italian Folktales*, trans. George Martin (New York: Pantheon, 1980), pp. xxiv, 207–213.


7. Michael Ryan, A Manual of Jurisprudence and State Medicine (London, 1836, 2nd ed.), pp. 246, 488. Ryan gives Robert Gooch, A Practical Compendium of Midwifery (London, 1831), as the source of the ostler's story and for similar stories refers his readers to E. Kennedy, Obstetric Medicine (London, 1834), which is indeed a rich source. The ostler's story is a variant on that of the farmhand in Montaigne's essay "On Drunkenness": a "widow of chaste reputation" finds herself inexplicably pregnant; she promises to forgive and marry the child's father if he will only present himself. One of her farmhands confesses that he came upon her "so fast asleep by her fireplace, and so indicated a posture, that he had been able to enjoy her without waking her." The Complete Essays of Montaigne, trans. Donald M. Frame (Stanford: Stanford University Press, 1965), p. 246. Stories of this sort did not become evidence for any general truths about the relationship of orgasm to conception until the nineteenth century. See also Heinrich von Kleist's "Die Marquise O..." in which the protagonist finds herself inexplicably pregnant. Mary Jacobus gives a rich account of this story in "In Parenthesis: Immaculate Conception and Feminine Desire," Body/Literature: Women and the Discourses of Science, ed. Mary Jacobus, Evelyn Fox Keller, and Sally Shuttleworth (London: Routledge, 1990), pp. 11–28.


24. Esther Fischer-Homberger, "Herr und Weib," Krankheit Frau und andere Arbeiten zur Medizinagichte der Frau (Bern: Huber, 1979). This account of the decline in the social status of procreation is part of a sophisticated argument for a decline in the importance of sexual potency and a rise in the significance of "mental" potency in men, which in turn the author regards as an indicator of the shift from family to public functions as marks of status. Doctors increasingly viewed the nervous system and the brain as the organizing structure of the human body; reproduction, now regarded as a female process, was demoted as a sign of status.


26. Anne Fausto-Sterling, Myths of Gender (New York: Basic Books, 1985). This book is not so much concerned with debunking stories on biological difference as in showing that so-called sex differences in behavior are actually gender differences.


34. In addition to Alcoff, note above, see Joan W. Scott, “Deconstructing Equality versus Difference: Or, the Uses of Post-Structuralist Theory for Feminism,” and Mary Poovey, “Feminism and Deconstruction,” in Feminist Studies, 14 (Spring 1988), 33–80, 50–66.


38. Ruth Bleier, Science and Gender: A Critique of Biology and Its Theories on Women (New York: Pergamon Press, 1984), p. 80. When she speaks of sexual differences, Bleier is by and large, but not always, referring to behavioral and not morphological or biochemical differences. I understand her claim to be that not only are so-called gender differences not natural but that prior politically salient understandings of sex as a biological category lead to the search for behavioral correlates.

39. Foucault, as feminists have pointed out, restricts himself almost entirely to the making of the male self. His use of the masculine pronoun is thus more than conventional. Still there is no reason why his method is not applicable to the making of the self, gendered or—if such a thing is possible—ungendered. For Nietzsche’s notion of the world as a work of art and its relevance to Foucault’s antiaffirmationalism, I have drawn heavily on Alexander Nehamas, Nietzsche: Life as Literature (Cambridge: Harvard University Press, 1985); quote from p. 3. I am sympathetic with Foucault, and by extension Nietzsche, but I agree with Nehamas that some interpretations of the world are better than others.

40. Jeffrey Weeks, Sexuality and Its Discontents (London: Routledge, 1985), p. 122. This is an immensely useful, learned, and insightful guide to “the subject of sex.”

41. Foucault, History of Sexuality, 1.157.

42. Ernst Laqueur was one of the discoverers of estrogen. He isolated the “female” hormone from the urine of stallions, thereby raising the uncomfortable possibility of endocrinological androgyny at the very moment when science seemed to have finally discovered the chemical basis of sexual difference.

43. Werner Laqueur’s article was published in Acta Brevis Nederlandiae, 6 (1936), 1–5. The “uterus masculinus,” now called the prostatic utricle, is a small hollow sac that extends into the body of the prostate. It is the “remains of that part of the Mullerian duct [the urogenital sinus] out of which, in the male, the vagina forms.” The uterus masculinus, in other words, is the vestigial vagina, so named because it was once thought to represent the remains of a structure from which the uterus and upper vagina derive. See also Keith L. Moore, The Developing Human (Philadelphia: Saunders, 1977, 2nd ed.), pp. 235–237.


45. “Thus heimlich is a word the meaning of which develops towards an ambivalence, until it finally coincides with its opposite, unhheimlich.” In light of the one-sex model, with its insistence on the vagina as an internal penis, this all becomes still stronger: “This unhheimlich place, however,” writes Freud, “is the entrance to the former kein [home] of all human beings, to the place where everyone dwelt once upon a time and in the beginning.” Freud, “The ‘Uncanny,’” (1919), Studies in Parapsychology, ed. Philip Rieff (New York: Collier, 1963), pp. 30, 51.


47. François Jacob, The Logic of Life: A History of Heredity, trans. Betty E. Spillman (New York: Pantheon, 1973; 1970 in French), p. 16. Jacob won the Nobel Prize for his work in molecular genetics. I use the term “narratives” to mean all those contexts in which the body figures, all those stories told about it. I once used the more limited term “metaphors,” which in its strict sense is too limiting.

48. Auguste Comte, Cours de philosophie positive, in G. Lezen, ed., Auguste Comte et Positivism (New York: Harper and Row, 1975), p. 178; italics mine. Positivism, first used systematically as a term by Saint-Simon and picked up by Comte in the 1830s, is the immensely influential view that an objective, scientific knowledge of nature was not only possible but could be the basis for social regeneration.


50. Barbara Johnson, The Critical Difference, quoted in Elizabeth Abel, ed., Writing

51. I here accept and turn on its head Elizabeth Abel’s comment in her introduction to The Critical Difference.


56. Leonore Davidoff’s and Catherine Hall’s Family Fortunes (Chicago: University of Chicago Press, 1987) is a model of the studies I have in mind.

57. Frederic Harrison, “The Emancipation of Women,” Fortnightly Review, 298 (October 1, 1891), 442–443. Harrison, the leading British positivist, gave this lecture on the anniversary of Emma’s death. Below I discuss Millen’s Fawcett’s reply in this debate among progressives on the woman question.


59. In addition to Bleier’s Science and Gender and Fausto-Sterling’s Myths of Gender, see Lynda Birke, Women, Feminism, and Biology (New York: Methuen, 1986).


2. Destiny Is Anatomy


2. Galen, On the Natural Faculties, trans. Arthur John Brock, Loeb Classical Library (Cambridge: Harvard University Press, 1952), 3.2, pp. 227–229. Cephas’s Anatomia proser, an apocryphal Galenic text produced at the famous medical school in Salerno during the twelfth century, begins the discussion of the matrix as an organ along with what ever ‘superfluities’ a woman generates during the month, her menstrual flow, could be sent there “like the bilge water of the entire body (tumpee ad ostium tumet corporis).” It is primarily a storage space. As if an afterthought, the writer says it is also the field of generation. See George W. Corner, Anatomical Texts of the Earlier Middle Ages (Washington: Carnegie Institute, 1927), pp. 50, 53.

3. See Isidore of Seville, Etymologiae, ed. José Oroz Reta and Manuel A. Marcos Casquero (Madrid: Biblioteca de Autores Cristianos, 1983), 12.1.134, for uterum in relation to cautela; the Latin text in this edition of the Etymologiae is identical to that in the standard edition of W. M. Lindsay (Oxford, 1911). The force of the proposition is somewhat dulled when Isidore goes on to say that the uterus resembles a little stalk (caulicula); this word, a cognate of the Latin and Greek caulis, was the important medical writer Celsius’ preferred term for penis and was used metaphorically for the male organ in Petronius, Satyricon 132.8. See J. N. Adams, The Latin Sexual Vocabulary (London: Duckworth, 1982), pp. 26–27.

Perhaps the ancient association of the uterus with the stomach/belly explains what would seem the bizarre claim, given then current anatomical knowledge, that the wandering womb pressing upward from the abdomen caused the choking and general feeling of constriction characteristic of hysteria. If one interprets this literally, there would be no explanation for male hysteria or for how the ancients thought that the womb made its way up through the various organs and divisions above it. But if one construes the womb as a retentive space/belly/hollow/stomach, the source of hysteria is properly localized. My sense is that ancient medicine is less interested in specific organic causes than in corporeal metaphors that correlate with symptoms.

4. Isidore is making much of the roots of uterum meaning belly, but he does have a separate discussion of agnatiarius (stomach) at 11.1.136. This word also has the sense of any vessel, hence belly. See Adams, Latin Sexual Vocabulary, pp. 100–101. We retain this in the way we speak to young children—“Mummy has a baby in her belly”—when we wish to be anatomically vague. On vulva—vagina—gateway to the belly, see Pseudo-Alberrus Magnus, De Secretis mulierum (1665 ed.), pp. 12, 19, or Anatome Magistri Nicolai Pellegrini, in Corner, Anatomical Texts, p. 85.

5. Isidore of Seville, Etymologiae 11.1.139.

6. It does not help matters that sinus—bosom—vagina or womb, as in simus matricis, could also, as in Lactansius’ use (sinus pudendus), mean penis. Adams, Latin Sexual Vocabulary, pp. 90–91.

8. UP 2.629. Galen did not invent the trope of the male’s eyes as the paradigmatic case of the imperfect version of a more perfect structure found elsewhere. See Aristotle, *History of Animals*, 1.4.509b26ff and 1.4.510a1–13; hereafter abbreviated HA.


12. GA 1.4.765b5ff. For peristeria used to refer to the female genitalia, see HA 1.4.493b9–10. Female genitals are called *aionia* at HA 1.4.493b2; male genitals are referred to by the same term at HA 2.1.500a33–b25. See also Peck, GA, p. 388, n. c; for *pudenda* see Adams, *Latin Sexual Vocabulary*, p. 66.

13. GA 1.2.716a19–21, 716a32–25. At HA 1.2.489a10–14 Aristotle defines “male” as emitting into another and “female” as emitting into itself—a suitably ambiguous effort to ground difference in anatomy and physiology.

14. HA 9.50.632a22. I put “ovaries” in quotation marks because Aristotle does not recognize the existence of female testicles, and no writer before the late seventeenth century construed the organ we now call the ovary as the source of an egg. The organ whose exclusion Aristotle referred to was “cut from the place where the boars have their testicles and adhere to the second division of the womb.”

15. This sentence is necessarily awkward because the relationship between genitals and gender is so complicated, as the studies of Robert Stoller on cases of ambiguous or “misassigned” sex suggest. See his *Sex and Gender* (New York: Science House, 1968), and Richard Green and John Money, eds., *Transsexualism and Sex Reassignment* (Baltimore: Johns Hopkins University Press, 1969).

16. GA 1.7.718a23. This works because “that which is carried too far is cooled.”


18. GA 1.4.717a26–30. Aristotle’s linking of the reproductive with the digestive system is based on the commonplace that generative products and products of the digestive system are both residues. Thus at GA 1.20.728a201–24 Aristotle argues that just as diarrhoea is caused by insufficient concoction of the blood in the bowels, “so are caused in the blood vessels all discharges of blood, including the menstrual blood,” though the former condition is morbid and the latter is not. Still, menstrual discharge is the result of a failure on the woman’s part not being as hot as the man and thus unable to concoct residue for the last time and to produce sperm.

19. Aristotle uses the highly specialized word *kupria* (female pig part) for the organ whose removal produces the dramatic results he describes. *Kupria* is the “sow virus,” a liquid from the female pig related to the spermid substance (*genes*, generative material) that oozes out of the sexual organs of mares in heat. The latter substance, the hippomane, apparently a version of the black matter on a new-born foal’s head, “resembles the sow virus (kupria),” and is in much demand amongst women who deal in drugs,” Aristotle says (HA 6.18.572a21–23). In the Renaissance the hippomane was still considered an aphrodisiac. Aristotle seems to suggest that the hippomane, qua liquid, is produced exclusively by mares impregnated by the wind but that the word also refers to the caud on foals, however they were conceived. The standard Greek term for ovaries was *oriches* (testicles), or *sibyumos* (twins); the Latin version *orich* referred to a flower. The ovaries are said to have been discovered by Herophilus of Alexandria in the third century B.C. See Staden, *Hippocrates*, pp. 167–168. Neither the word “ovary” nor “ovum” for its content was used until the late seventeenth century.

20. GA 1.3.716b33 and more generally HA 1.17.497a30–31. This similar works because the two suspensory ligaments, including presumably what are now called the Fallopian tubes, are imagined as “horns of the uterus”; the ovaries then become visual analogues to the testes so that the body of the uterus becomes the female scrotum of Galen’s description.

21. See Soranus, *Gynaecology*, trans. Oswei Temkin (Baltimore: Johns Hopkins University Press, 1956), 9.1.16, p. 14, and p. 10, n. 6, where Temkin points out that the word for tube is also the word for penis. Celsius writing in the first century B.C. used *cauda* (stalk), which he got from the Greek *kanos*, as his standard term for the penis. Caecilius Aurelius used *kanos* as the equivalent of *aionon*, which was a common word for penis as well as for female pudenda. He and other Latin medical writers regarded *aionon* as meaning *nervorum*, another common Latin word for penis. See Adams, *Latin Sexual Vocabulary*, pp. 26–27, 52–53.

22. Julius Pollux, *Onomatia* (Vocabulary), ed. Eric Bethe (Leipzig: Teubner, 1900), 2.171. Pollux was little known in antiquity, but the 1502 printing of his text and subsequent Latin-Greek editions were immensely important during the Renaissance as a source for new, non-Arabic anatomical nomenclature.

23. HA 10.4.656a6–7. If this writer had Soranus’ image in mind, it would commit him to having the womb ejaculate into its own foreskin. The genuine Aristotle frequently writes about the womb breathing in material—it draws it up like a cupping glass—but does not believe that the womb itself ejaculates semen (for example, GA 2.4.739b1–20 and HA 7.3.583a15–16).

the child is a result of the same sort of battle that determines sex. (See GA 1.17.725b13ff for the classical attack on this position.) "On Generation" simply asserts that no child can resemble only one parent, which is another way of saying that men are necessary and women cannot simply clone themselves (see 8.1 and 8.2). On pangenesis and ancient theories of inheritance generally, see Erna Lesky, Die Zeugung und Vererbungslehre der Antike und ihr Nachwirken (Mainz: Akademie der Wissenschaften und der Literatur, 1950).

41. Hippocrates offers no account of why there are not, as this model might suggest there would be, a large number of creatures whose genital configuration would be "in between," making them difficult to classify socially. Nor does he address the question, which vexed others, of why the female needs the male at all if she is indeed capable of producing a strong malelike sperm.

42. The case is made explicitly in Galen, Peri spermatozón (On the Seed), Kuhn ed., 4.2.4, p. 622. He argues elsewhere in this text that "females have seminal ducts and testes full of semen." If males had milk in their mammary ducts, there would be no reason to inquire what it was for. "Likewise, since females have semen there is no need to wonder whether they excrete it" (2.1, p. 600).

43. Avicenna, Canon (Venice, 1564), 3.30.1.3. At 3.31.1.1 Avicenna, like Galen, makes the case that the female organ of generation, the womb, is "as it were, the male organ reversed." The Latin translation of Avicenna's Arabic uses sperma for both the male and female ejaculate, and Avicenna is at pains to criticize those who equate the female seed with the menstrual fluid. Generally speaking, Avicenna maintains an Aristotelian position on generation while reproducing almost verbatim the Galenic system of anatomical isomorphisms. See Danielle Jacquart and Claude Thomasset, Sexuality and Medicine in the Middle Ages (Princeton: Princeton University Press, 1988), pp. 36ff.

44. See Boylan, "Galenic Challenge." On other occasions Aristotle uses gynomes (generative, productive) to refer to sperm. He uses the same word to refer to the female contribution.

45. GA 1.21.729b17ff, 2.1.734b20ff, which discusses the complicated relation of the soul(s) to sperma generally; 2.3.737a10-16. Renmet is the mucous lining of a calf's stomach which contains rennin, an enzyme used to curdle milk. Pig juice serves a similar function; HA 6.18.572a15.

46. Biological and intellectual conception are closely related, as Aristotle's seventeenth-century proponent William Harvey noted.

47. The medieval text (De secretis mulierum) of the Pseudo-Alberrtus Magnus uses menstruum to refer to the female seed and sperma to the male seed in the discussion of conception, in which the two seeds (dus semen) meet in the vulva (vagina). See Charles Wood, "The Doctors' Dilemma: Sin, Salvation, and the Menstrual Cycle in Medieval Thought," Speculum, 56 (1981), 716, and John E. Benton, "Clio and Venus: An Historical View of Medieval Love," The Meaning of Courly Love, ed. E. X. Newman (Albany: State University of New York Press, 1969), p. 32, on menstruum as seed and sinuum menstruum as menstrual blood. Aquinas' concern is to have the Virgin be both a material and a formal cause for the human Christ; see esp. Summa theologia, 3a.31.5, and Wood, p. 27. Clearly more than biology is at stake in the question of whether menstruum is called a seed. In claiming a lack of clear distinctions between a one-seed and a two-seed model, I am arguing against the position put forward by Anne Lise Thomasen, "Historia animalium contra 'Gynaecia' in der Literatur des Mittelalters," Clio Medica, 15 (1980), 5-23, where she describes two distinct and mutually exclusive traditions.

48. GA 4.8.776b10. See Boylan, "Galenic Challenge," p. 94, where he concludes, rightly I think, that the uterus does engage in an inferior form of the "fourth conception of sperma" which the spermatic ducts in men do better. More generally on how food is heated to produce blood and generative material, see Michael Boylan, "The Digestive and Circulatory Systems in Aristotle's Biology," Journal of the History of Biology, 15 (1982), 89-118. The fact that HA 10.1.634b30ff and 10.6.637b32, for example, use sperma for both the male and female generative products is one reason why scholars doubt the authenticity of book 10. Whether by Aristotle or not, this linguistic equation seems to move in the direction taken in genuine Aristotelian texts.

49. GA 1.19.726b5ff. on old men and boys see GA 1.18.725b20. The semen of drunkards, says the pseudo-Aristotelian Problems 50.866a53, is infertile because it is too moist and produces too liquid a residue.

50. It is no wonder, Peter Brown suggested to me, that both the Gnostic and the Manichean traditions emphasize ejaculating sperm as the final step in delivering light/spirit from base matter.

51. Paul Delany, "Constantinus Africanus' De Causis: A Translation," Chaucer Review, 4.1 (1969), 59. Constantinus Africanus was an eleventh-century physician, steeped in ancient medical learning, who taught in the medical school at Salerno. For more on this point and on the widely varying and often contradictory advice proffered by doctors, see Jacques and Thomasset, Sexuality, pp. 53ff, 87-96. As will become clear, I differ from them in that I argue against the sharp division they wish to make between male and female reproductive physiology.

52. The Divine Comedy: Purgatory, tr. Dorothy L. Sayers (Harmondsworth: Penguin, 1955), 25.87-45, p. 264. Obviously the reference is to the male, but his refined blood is sprayed on the refined blood of the female, which has been concealed by an identical process.

53. Pseudo-Alberrtus Magnus, De secretis mulierum, 1.19. This twelfth-century text was widely copied and later printed first in Latin and then in various vernaculars. (There is an English edition as late as 1745.) See Lynn Thorndike, "Further Consideration of the Exsurpenta, Speculum Spermatorum, and De Secretis Mulierum ascribed to Albertus," Speculum, 30 (1955), 413-443.

54. The story of Tiresias is in Ovid, Metamorphoses, 3.323-331. One might translate the question more specifically as "which sex had the better orgasm (musa volup-
tiae)." See also Leonard Barkan, The Gods Made Flesh: Metamorphosis and the Pur-
suit of Paganism (New Haven: Yale University Press, 1986), pp. 41-42; and his discussion of how the act of love in Ovid and other poets "blurs distinctions by transforming the lovers into hermaphrodites" (p. 57). The story of Narcissus in Metamorphoses follows immediately after the brief account of Tiresias.

55. UP 2.651. By "genital areas" Galen means here the inner organs and their male equivalents. Note once again the association of parts: semen/uterus as well as digestive organs/generai organs.

56. The Parts of Animals, 4.9.689a5ff, in Complete Works, Ross ed.
57. Galen explains, correctly by modern standards, that the vessel from the right kidney, today called the internal spermatic vessel, passes directly to the uterus. He thought that this gave the serious, exciting, reside a straight shot to its sensitive target (UP 2.614). "Right" here is from the viewer's perspective.

58. Pseudo-Aristotle, Problems, 1.26.879a36–880a5. P. H. Schrijvers, the editor of Caelius Aurelianus' De Morti Chronicis IV: Eine medizinische Erklarung der mannlichen Homosexualitat au der Antike (Amsterdam: B. R. Gruner, 1985), comments on this passage and argues that the passive homosexual, the mellis, is therefore a "bisexual" with excessive desire (an excess of semen). The connections between these organs are mirrored in language: vagina as a sheath was a metaphor for men. Adams, Latin Sexual Vocabulary, pp. 20, 115. See Jaquet and Thomas, Sexualité, pp. 124–125, for an account of a long and technical discussion comparing the anal sphincter with the muscles of the uterus (vagina, cervix, etc.) in al-Samani's Ibn Yahyā (d. 1180), Book of Conversation with Friends on the Intimate Relations Between Lovers in the Domain of the Science of Sexuality.

59. UP 2.622–623, 658–659, 660–661. The symptom (2.661), by which Galen seems to mean the clitoris, is said to be like the uvula, which gives protection to the throat. Here again reproduction and breath, breathing and ejaculation, the throat and the genital passages, are linked.


63. Galen, UP 2.640–643. The citation from Democritus to which Galen refers is probably the following: "Cestion is a slight attack of apoplexy; for man rushes forth from man, and is separated by being torn apart with a kind of blow. See Herman Diels and Walfried Kranz, Die Fragmente der Vorsokratiker (Berlin: Weidmann, 1951–52), p. 68b22. Though Aristotle was explicitly opposed to Democritus' interpretation of this as evidence for generation, he too regarded the intense pleasure of orgasm as being due to a sudden burst of pneuma in both men and women (GA 1.20.728a10, 2.4.780b26–32). The image of corpus as a version of epilepsy remained in currency for centuries; see, for example, the first major Christian educational guide, Clement of Alexandria's Paediaugy, 2.10. In the early 1960s the Vatican censured Alberto Moravia's novel Empty Conus for its "sexual realism" because a love scene was likened to epilepsy; the woman and not the bored lover had the seizure.


65. Tertullian, A Treatise on the Soul, in The Ante-Nicene Fathers, ed. Alexander Roberts and James Donaldson, 3 vols. (Grand Rapids: Erdmans, 1976 reprint), 3.208; the sentence before the ellipsis is from a translation by Peter Brown which he has kindly allowed me to use. I substitute his language to emphasize that both sexes are caught up in the pleasure of sex no matter who contributes true semen. See J. H. Wasmink's commentary, pp. 342–348, in his edition of Tertullian's De anima (Amsterdam: J. M. Meulenhoff, 1947), on the nature of the contributions of each sex to a new life which makes manifest the difficulties of determining what ancient authors actually meant.


67. GA 2.4.739a27–30. He wants to hold that even when a woman emits, it is not semen but "merely proper to the part concerned" (GA 1.20.727b35–728a1).

68. GA 2.4.739b20–23; also 1.19.727b34–728a24. Aristotle is willing to admit that men can emit semen without feeling it, as in wet dreams.

69. GA 1.18.723b33. This argument works, in Aristotle's view, against the pan-genesis position that female orgasm is evidence for her producing semen and that semen comes from all parts of the body of both sexes.

70. GA 1.20.728a11–21. This is where Aristotle argues that a woman is an unimportant man, or like a boy.

71. HA 1.6.638a5ff. At GA 2.739a20–26 Aristotle argues that, even though women also have wet dreams, their discharge does not contribute to the embryo, because boys who have no semen and men who seem infertile also have nocturnal dreams. Again the move is to shield the maleness of generativity from empirical investigation.

72. Actios, Tetrabiblion, 16.1. Ricci trans., pp. 19, 36. It is implicit in the Hippocratic "On Generation," 5.1, which describes how the womb contracts when it has received the seeds. Experienced women could supposedly tell from this contraction the precise day of conception. See Lonie's commentary, p. 124, for other references to the womb's sucking in its own and the male ejaculate.

73. "On Generation," 4.2. When the hierarchy of heat does not work, the hierarchy of activity takes over. Thus man's sperm arriving at the womb before the woman's orgasm extinguishes "both the heat and pleasure for woman," just as pouring cold water into boiling water cools the latter. Again, one must not construe "hot" and "cold" in the medical literature as meaning what they would today. Thus most of the Hippocratic corpus regards men as hotter and hence more perfect than women, whereas Regimen holds that men are colder and more perfect. No empirical dispute divides these positions.

74. HA 1.10.635b19–24. This sweating is also likened to the tears that come in bright light or as a response to cold or great heat. For my purposes, again, it does not matter that this book is probably not by Aristotle. The specificity of its reference to prostatic lubricity, as opposed to the emission of female sperm at orgasm, may indicate that the passage is the voice of women as transmitted by an anonymous ancient physician. See note 57 above.

75. HA 1.10.636b12ff; see also 10.1.634b21ff and 10.1.634b3, regarding optimal conditions of dryness or wetness.

76. Rhazes, Liber ad almanonum (1481), 5.73.

77. Canon, 3.20.1.44. One might imagine this better in a basically polygamous society where wives are prized either for the pleasure they give or for their capacity to bear sons. Abandoned by their husbands, they seek pleasure among themselves. Perhaps the point is to enforce the norm that men should keep trying to give women pleasure since reproduction, of sons, is as much their responsibility as the women's.

78. This may seem totally implausible. But Soranus had an escape. Just as a grieving widow might not know that she has an appetite and both needs and will make