synecdochic leap to incommensurability that would in any circumstances be unsupportable.[65] But it is particularly ironic because the large role of the ovary in the biological lives of women—though certainly not making woman "what she is"—was finally established in the late nineteenth century by assuming that which was yet to be proven and using it as justification for the surgical removal of histologically normal ovaries. Bilateral ovariotomy—the removal of healthy ovaries—made its appearance in the early 1870s and became an instant success to cure a wide variety of "behavioral pathologies": hysteria,[66] excessive sexual desires, and more mundane aches and pains whose origins could not be shown to lie elsewhere. (The procedure was also called in German "die castration der Frauen," in French "castration chez la femme," or eponymously "Battey's or Hegar's operation" after Robert Battey and Alfred Hegar, the American and German surgeons who popularized it. It should be distinguished from what were usually called ovariotomies, the removal of cancerous or cystic ovaries for therapeutic reasons that would be regarded as medically sound today. The number of these operations also grew dramatically, as indeed did the number of all operations in the late nineteenth century, especially after the acceptance of Lister's aseptic techniques.[67])

Removing healthy ovaries in the hope of curing so-called failures of femininity went a long way toward producing the data from which the organ's functions could be understood. The dependence of menstruation on the ovary, for example, was shown by assuming that the swelling of the ovarian follicle produced heatlike, estrous symptoms in some women and that removal of the organ would therefore halt such sexual excesses.

There is a further irony in all of this because the operation both assumes and does not assume incommensurable sexual difference; it purports to create women who both are and are not more like men than they were before the procedure. The name itself, female castration, suggests the old view that the ovaries are female testicles, much like the male's. But doctors were quick to deny that ovariotomy was anything like castration in its psychological and social effects. There are no pictures comparable to fig. 60 in which roles are switched, in which instead of men, scalpel in hand, seen poised over the prostrate body of a woman, men (or more inconceivably yet, women) surgeons are preparing to castrate a man. There was no male castration, no removal of healthy testes, except in a few rare and quite specific instances for criminal insanity or to treat cancer of the prostate. While the female gonad was assumed, like its male counterpart, to have profound effects on various parts of the body, ovaries were not testicles in any cultural or metaphorical sense in the minds of the overwhelmingly male medical profession. They, unlike testicles, were not sacrosanct.

Fig. 60. Three male surgeons, c. 1880, performing an ovariotomy on a patient with a large cyst.

Yet the theoretical justification for "female castration" was that the ovaries, a woman's "stones" (once understood as a cooler version of the testes), were in fact the master organs of the female body so that if she lost them she would become more malelike, just as castrated males would become more femalelike. Ovariotomy did cause women to stop menstruating and did effect other changes in secondary sexual characteristics that made them more like men. On the other hand, removing the ovaries also made a woman more womanly, or at least more like what the operation's proponents thought women ought to be. Extirpating the female organs exorcised the organic demons of unladylike behavior.

All of this speculation about the synecdochic relationship between an organ and a person—a woman is her ovaries—or even between the ovary and some observable physiological or anatomical change was ideological hot air. Up to the late nineteenth century no one knew what removing the ovaries would do. (Even today the effects of postmenopausal ovariotomy are not well understood.) Far more was known about the effects

of removing the testes. Aristotle and other ancient writers had recognized the physiological, and what they took to be psychological and behavioral, consequences of both pre- and postpubertal castration in men. Eunuchs figure prominently in medical and moral writings, in a variety of both Christian and pagan religious practices, and there are many observations on the effects of castration in male domestic animals.[68] But there are, as far as I know, no commentaries on the removal of ovaries in women and only a single reference to the procedure in animals: "The ovaries of sows are excised with the view of quenching in them sexual appetites and of stimulating fatness," wrote Aristotle; female camels, he continues, are mutilated to make them more aggressive for "war purposes" and to prevent their bearing young.[69]

Nothing was written on the relevance of such observations to humans until the advent of ovariotomy in the 1870s. For two millennia, from ancient Greece to late eighteenth-century London, there was no human case reported in medical or popular literature. Then Percival Pott, a distinguished surgeon at St. Bartholomew's Hospital in London, announced that he had examined a woman, age twenty-three, with two small soft masses, "unequal in their surface," one in each groin. She appeared healthy, menstruated regularly, and suffered no pain except when she stooped. Eventually she became "incapacitated from earning her bread" and, when nothing else alleviated her distress, agreed to have the growths removed. To Pott's apparent surprise, they were her ovaries. He notes that his patient returned to good health but that she appeared thinner and more muscular; "her breasts, which were large, are gone; nor has she menstruated since the operation, which is now some years." He offers no account of why all this happened.[70]

When in 1843 Theodor von Bischoff, the discoverer of spontaneous ovulation in dogs, wrote that the ovaries govern the human female reproductive cycle, he had but one further piece of evidence: the account of one Dr. G. Roberts, a medically trained traveler who claimed to have seen "castrated" women in India, aged about twenty-five, whose breasts were undeveloped, whose external pudenda lacked the usual fat deposits and covering hair, whose pelvises were deformed and buttocks male-like, who showed no signs of menstruation or any compensatory process, and who had absolutely no sexual drive.[71] Even if one credits this report and adds to it a series of casual clinical observations correlating malformation of the ovaries with absence of menstruation, the evidence available by the middle of the nineteenth century for the function of the ovary in the reproductive physiology of women remains slight.

The rise of "justifiable" ovariotomy after 1865—mostly for cysts, tumors, or other obvious pathologies—began to provide some quasi-experimental evidence for the ovary's functions, but since the workings of a healthy organ could not in many cases be reliably deduced from the effects of excising its diseased counterpart, such material was less than conclusive. Though an authoritative German handbook argues that there were so many cases on record attesting to the connection between the ovary and menstruation that further cases were scarcely worth noting, it still refers to Bischoff's by now forty-year-old citations of Roberts and Pott (whose report itself had by then been around for a century). Moreover, it proceeds to note that considerable weight was currently being placed on instances of menstruation continuing after removal of the ovaries and that, should a recent attack on such evidence prove inconclusive, one might have to reconsider whether the intimate relationship postulated between the uterus and the ovary had not been exaggerated.[72] In 1882 a French handbook cites both new material and much older evidence which suggested that the role of the ovary in menstruation and indeed in the whole reproductive cycle might well be as passive as that of the uterus.[73]

No one bothered to adduce age-old practical experience with oophorectomy in animals before 1873 when, a year after Battey began to advocate removal of the ovaries for various neurotic ills, a French physician remarked that in cows and pigs in which the operation was "commonly done during the first two months of life, the uterus ceases to grow and its volume remains stationary."[74] In short, when Battey and Hegar began removing healthy ovaries, and at the height of popular belief in the life-determining role of the organ, almost nothing was known of its function in women and no effort had been made to exploit what little veterinary experience existed. Here is a question not of the indeterminacy of anatomical and physiological knowledge but of willful ignorance.

Twenty years and the removal of thousands of healthy ovaries later, some of the assumptions on which the operation had been predicated finally rested on experimental evidence. It was Alfred Hegar, the distinguished professor of gynecology at Freiburg and the main European advocate of female castration, who brought the wisdom of generations of farmers together with his own clinical practice. Curious to know the

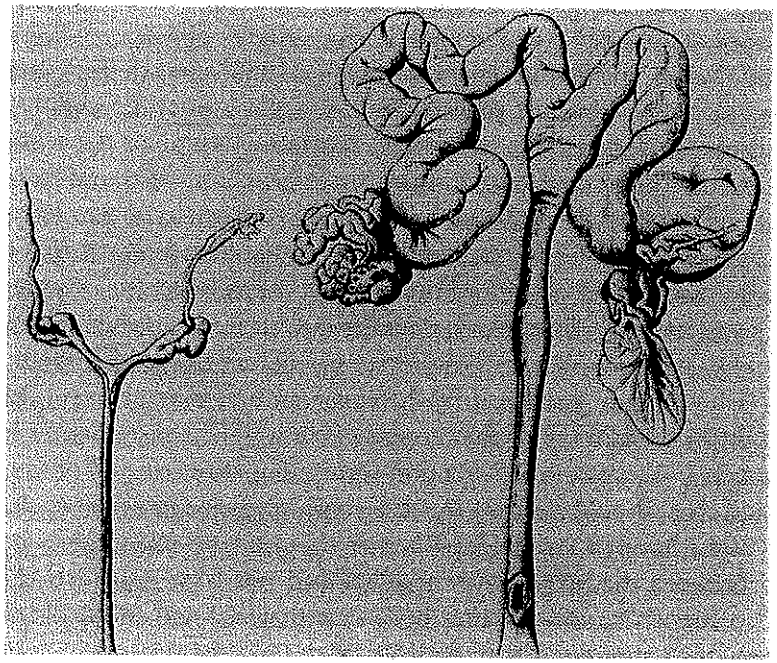

Fig. 61. Alfred Hegar's "first illustration of castrate atrophy of the uterus ever published."

long-term effects of the operations he was already performing, he searched the literature and found that female castration in animals was an ancient practice. He discovered that the castration of cows was popular in France in the 1830s but that the practice had fallen out of favor because the cows got too fat and stopped lactating. Veterinarians in his own day still removed ovaries but only when medically indicated: for "desire for the bull, a sort of nymphomania" (*Steiersucht, eine Art Nymphomanie*), which afflicted some 10 percent of the cows in certain regions![75]

Not to be deterred in his quest for knowledge, Hegar went back to the classics and to Aristotle's account of cutting out a sow's ovaries. He then sought out a *Schweine-Schneider,* "a cutter of pigs," whose basic technique, it turned out, was indistinguishable from that of his Greek predecessor, though from a nineteenth-century bourgeois perspective much more disgusting. The man took out a dirty knife, made a two-centimeter incision, put his dirty fingers around the ovaries, tubes, and ligaments, and cut them out. He then sewed up the incision with a needle and thread drawn from his "evil-smelling" trousers. (It has never been clear to me why, with such an exquisite sense of dirt and propriety, the idea of aseptic surgery did not occur to Hegar and his contemporaries in the decade before Lister. Hegar, by his own account, lost a third of his patients to sepsis.)

Having watched the pig cutter at work, Hegar tried the operation himself. He bought two female piglets and proceeded to remove both ovaries from one and only one from the other. When they had grown to maturity, he had them butchered and found that the completely spayed pig showed dramatic aplasia of the uterus, a uterus of infant size. He made a drawing of this specimen, had it engraved, and proudly published it as the "first illustration of castrate atrophy of the uterus ever published."[76] One need not deride the genuine contribution to knowledge that Hegar's experiments represents in order to condemn him, Battey, or other doctors for the mutilations they practiced in the name of therapy. The important point, however, is not simply that they were driven by a particular vision of woman to regard the ovary as the source of illnesses whose origins lay more in culture than in the body, but rather that they subscribed to an epistemology that regarded anatomy as the foundation for a stable world of two incommensurable sexes. Ovaries were removed not because they made women what they were, nor even just because of physicians' antifeminism, but because some doctors took literally the synecdoches they had invented. Ironically their practices did yield new knowledge about the ovaries' physiological functions. But their symbolic role, their function as a sign of difference, was untouched by progress.

Orgasm and sexual difference

On May 15, 1879, Mabel Loomis Todd—later the lover of Emily Dickinson's brother—carried out an extraordinarily precise experiment. Her hypothesis was that she would be fecund only at the moment of climax because afterwards her womb would close off, and "no fluid could reach the fruitful point." To test this proposition she allowed herself, she says, "to receive the precious fluid at least six or eight moments after my highest point of enjoyment had passed and when I was perfectly cool and satisfied." She got up and, since all of her husband's semen had apparently escaped, considered herself vindicated; their daughter Millicent, born nine months later, proved her wrong.[77]

Mabel Todd was very wrong. Unlike questions of anatomy and sexual difference, the question of whether women can conceive without orgasm—however culturally desirable "passionlessness" might be—can be definitively answered. So can the question of whether female orgasm closes off the womb. Empirical evidence can address even more complicated and problematic matters: whether women generally have orgasms during intercourse, or whether they have strong sexual—I mean here heterosexual—drives at all.[78] But, though science certainly articulated new views about female passionlessness as part of the making of two sexes, it provided only inconclusive and fragmentary evidence on orgasm until the early twentieth century, more than a century after the abandonment of the universally held view linking orgasm to generation and women to passion. New information, much less a coherent new paradigm in reproductive biology, did not render ancient wisdom out of date. (I will show, in some technical detail, that nothing about the discovery of the ovaries or their functions required major revisions in the physiology of pleasure and conception. Readers willing to accept this without elaborate documentation might want only to skim this section, especially the pages on the corpus luteum.)

De Graaf's careful dissections, which established that "female testicles should rather be called ovaries," inadvertently strengthened the link between intercourse and female "emission" because they showed that in rabbits the follicles, which de Graaf took to be eggs, "do not exist at all times in the testicles of females; on the contrary, they are only detected in them after coitus." Like other observers for at least the next century and a half, he was sure that ovulation occurred *only* as a result of intercourse, which simply by the nature of things had to be pleasurable: "if those parts of the pudendum [the clitoris and labia] had not been supplied with such delightful sensations of pleasure and of such great love, no woman would be willing to undertake for herself such a troublesome pregnancy of nine months." De Graaf's was the standard Renaissance account, except for his views on the female ejaculate: instead of being understood as weaker, more watery semen, it was construed as an egg in its surrounding liquid.[79]

There were actually very little new data on reproductive physiology. "The modus of conception," as the obstetrician William Smellie noted in 1779, "is altogether uncertain, especially in the human species, because opportunities of opening pregnant women so seldom occur."[80] One had to take the cases when they came along and make up a narrative as best one could.

Albrecht von Haller, for example, one of the giants of eighteenth-century biological science, simply projected male sexual experience onto women. He did this not because he had any particular interest in maintaining the skewed symmetry of the Galenic model, but because the analogy of the sexually aroused woman to the sexually aroused man seemed so commonsensical:

> When a woman, invited either by moral love, or a lustful desire of pleasure, admits the embraces of the male, it excites a convulsive constriction and attrition of the very sensible and tender parts, which lie within the contiguity of the external opening of the vagina, after the same manner as we observed before of the male.

The clitoris grows erect, the nymphae swell, venous blood flow is constricted, and the external genitalia become turgid; the system works "to raise the pleasure to the highest pitch." A small quantity of lubricating mucus is expelled in this process but, more important, "by increasing the heights of pleasure, [it] causes a greater conflux of blood to the whole genital system of the female," resulting in an "important alteration in the interior parts." Female erection, inside and out. The uterus becomes hard with inflowing blood; the Fallopian tubes engorge and grow "so as to apply the ruffle or fingered opening of the tube to the ovary." Then, at the moment of mutual orgasm, the "hot male semen" acting on this already excited system causes the extremity of the tube to stretch still further until, "surrounding and compressing the ovarium in fervent congress, [it] presses out and swallows a mature ovum." The extrusion of the egg, Haller points out finally to his learned readers, who would probably have read this torrid account in the original Latin, "is not performed without great pleasure to the mother, nor without an exquisite unrelatable sensation of the internal parts of the tube, threatening a swoon or fainting fit to the future mother."[81] The evidence for this scenario was scanty, but there is some in the literature. An English anatomist in 1716, for example, dissected a woman who had just been executed and purportedly found one tube "clasped around the ovarium"; upon investigating how this might have come about, he learned that "she had enjoyed a man in prison, not long before execution."[82]

Intercourse continued to be linked to ovulation and to an inner drama

that, as in Haller's account, could be plausibly marked by pleasure. W. C. Cruickshank, searching for rabbit ova in 1797, found the corpus luteum only after coition, from which he concluded that "the ovum is formed in and comes out of the ovarium after conception." (The corpus luteum, the "yellow body," is formed after an ovarian follicle releases the egg. It is now known to secrete progesterone, which maintains the uterine lining in a state suitable for implantation. In most mammals it forms "spontaneously," independent of intercourse or conception, because ovulation occurs spontaneously; but in rabbits, which are generally coitally induced ovulators, it would not be present except in the circumstances Cruickshank describes.) But, more important, there seemed to be evidence for a real battle in wresting the egg from the ovary. The Fallopian tubes, he thought, "twisted like wreathing worms . . . [which] embraced the ovaria (like the fingers laying hold of an object) so closely, and so firmly, as to require some force, and even some laceration, to disengage them." Of course rabbits are not women, but Cruickshank clearly thought that his findings were applicable to humans, and so it would be surprising if so stormy a scene had no sensory correlative. The evidence would thus suggest that ovulation, like male ejaculation, would occasion some pleasurable feeling.[83]

C. E. von Baer (1792–1876), the German-Estonian biologist who was the first actually to see the mammalian ova, was still convinced when he reported on his extraordinary series of observations in 1828 that only a bitch who had recently mated could produce the egg he was seeking.[84] Indeed up to the early 1840s almost all authorities believed that coitally induced ovulation in humans as well as in other mammals was the norm. Thus in the two-sex model, as before, the generative substances in *both* men and women were believed to be produced only during intercourse; only now it was thought by some that these events could routinely occur, in women, without sensation.

This does not mean that no one advocated the view that ovulation occurred spontaneously. (If it did take place without intercourse, then a sort of mechanical, passionless conception would seem likely.) But what were later taken to be critical data against coitally induced ovulation in humans were, until the second half of the nineteenth century, interpreted as anomalous. There was nothing decisive in the existence of scars or "cicatrices," that is, the remains of the corpus luteum in the ovaries of virgins; burst follicles in the ovaries of women who died during or just after menstruation; or simply more scars in the ovary than could be accounted for by fruitful coition. Biologists seemed unwilling to let go of the idea that somehow the excitement of intercourse and sexual arousal was relevant to conception even if, miraculously, women did not feel any. Anesthetic conception, in other words, in no way followed from observation.

Thus John Pulley, an obscure eighteenth-century Bedfordshire doctor, found corpora lutea in virgins but argued that these scars were the result of uterine excitation induced through the unnatural "gratification" of desires, one presumes masturbation. Evidence from the dissection of "hysterical women" whose ovaries showed the signs of ovulation provided further proof, according to Pulley, for the role of sexual excitement in causing the extrusion of the egg.[85] Though forensic texts during the first half of the nineteenth century were generally skeptical of the notion that heightened pleasure signaled either conception or ovulation, and made much of the possibility of conception from nonconsensual intercourse, it remained perfectly plausible that ovulation did require the Sturm und Drang of coition or a reasonable facsimile. J. G. Smith wrote in a standard 1827 textbook that he could not deny that "there may be a sensible impulse conveyed by the excitement into which the uterine system appears to be thrown," when conception takes place. But, he said, many women are apt to imagine, out of hope or fear, that they have conceived—their reports on this matter are not to be trusted and can be of no practical concern.[86]

On the other hand, the question of whether a corpus luteum is evidence of past pregnancy or of intercourse *was* of considerable significance to forensic physicians: "it is a celebrated question, of great importance both in physiology and forensic medicine, and much agitated in recent years."[87] The answer was a qualified and complicated no. Women did show signs of ovulation without pregnancy or even intercourse, the majority view held, but only because the female reproductive system could be coaxed into action by lesser stimuli, strong desire for example. So, while generally speaking the presence of a corpus luteum could be taken as evidence for a woman's having had intercourse or a pregnancy, it was far from conclusive proof. Since "all those causes which excite greatly the sexual organs" can cause ovulation, the presence of corpus luteum is not "taken alone . . . a certain sign of sexual union having occurred"; but taken together with other signs it must be regarded as good presumptive evidence.[88] "A jury ought to be cautious," said one authority in jumping to the conclusion, based on signs of ovulation, that a woman had not

been a virgin despite the "fact" that ovulation was generally occasioned only by fertile intercourse.[89] "Upon certain occasions," advised another, "excessive salacity may detach the ovum" and leave the scars in question.[90] (There is added confusion here because nineteenth-century doctors could not distinguish between the larger and more visible scars of the *corpus luteum verum*—the much enlarged corpus luteum that remains until the fifth or sixth month of pregnancy—and the smaller remains of the *corpus luteum spurium,* which fades rapidly after two weeks if pregnancy does not occur.[91])

A great deal rests on these controversies over the corpus luteum because they suggest that, as late as the early 1850s, no one had a clear idea of the circumstances governing the production of the egg. The evidence pointed to an even larger role for venereal excitement than in the old model of bodies and pleasures. Thus Johann Friedrich Blumenbach (1752–1840), professor of medicine at Göttingen and one of the most distinguished physicians of Europe, noted that ovarian follicles could burst without the effects of semen or even "without any commerce with the male," but concluded from this simply that on occasion "venereal ardor alone . . . could produce, among the other great changes in the sexual organs, the enlargement of the vesicles" and even cause their rupture. Far from undermining the old orgasm-conception link, Blumenbach's observations strengthened it; desire alone was enough to excite ovulation in certain sensitive systems. His English translator added supplementary anecdotal evidence: Valisneri's report of finding vesicles protruding from the ovaries of an eighteen-year-old woman who had been brought up in a convent and gave every appearance of being a virgin, a situation "frequently observed in brutes during heat"; Bonnet's report of a young woman who died "furiously in love with a man of low rank, and whose ovaria were turgid with vesicles of great size." Though not too confident of his position, Blumenbach ended up even more committed to the importance of sexual excitement than Galen was:

> On this point I find it difficult in the present state of knowledge to make up my mind; but I think it pretty evident that, although semen has no share in bursting the ovarium, the high excitement which occurs during the heat of brutes and the lascivious states of the human virgin is sufficient frequently to effect the discharge of ova. It is perhaps impossible otherwise to explain the fact that ova are so commonly expelled from the ovaria, and impregnated whenever a connection is arbitrarily or casually brought about.[92]

Johannes Müller (1801–1858), a brilliant teacher and a leading proponent of physiological reductionism, also downplayed the evidence that might have suggested spontaneous ovulation in women. He argued that the presence of scars in the ovaries of virgins were merely signs of anomalous ovulation and not of normal ovulation independent of coition and conception. Though the exact forces that caused the thrusting of the egg into the Fallopian tube remained obscure, most of the evidence suggested that the egg itself was generated only as an immediate part of the process of fertilization itself. Humans worked like that ubiquitous experimental creature of the nineteenth century, the rabbit. Something spectacular was still thought to happen in coition, and medicine lent little technical support for the rise of passionlessness.[93]

Nineteenth-century accounts of the mechanics of conception also offered no technical support for the notion of anesthetic intercourse and conception. What emerges is a new and vastly inflated role for semen, which somehow pushes, squeezes, or otherwise excites a woman's insides and which, judging from the silence on the matter, is able to do so without her feeling anything. The distinguished Edinburgh physician John Bostock argued that in women "certain causes and especially the excitement of the seminal fluid" produced "an unusual flow of blood to the ovaria"; amid all the "excitement" a vesicle bursts and discharges a drop of albuminous fluid (the egg was still only imprecisely imagined), which is picked up by the erect Fallopian tubes embracing the ovary and carried down to the uterus.[94] Once again, we have a projection of male physiology inward. Another eminent obstetrician thought that the male sperm worked like an electric current coursing through the Fallopian tubes and causing the expression of the ovum; a major English medical handbook in 1836 postulated the swelling of the follicle as a consequence of sexual excitement and its bursting as the result of "an action which begins usually during sexual union, but which may also occur without any venereal orgasm."[95]

The remarkable thing about all these accounts is not that they are wrong by modern standards—humans ovulate, and the corpus luteum is formed, independent of intercourse, orgasm, or conception—or even that they are so rich in what today seem like improbable metaphors, but rather that they grant so large a role to female sexual excitement and genital arousal. More remarkable still is that they say so little about the accompanying sensations. Orgasm continues to play a critical part in conception but now those who suffer it need feel nothing.

In part this has nothing specifically to do with women or with intercourse. Sexual pleasure was not the only subjective quality to lose its place in the new medical science. The power of the anatomical-pathological model, as it emerged from Paris hospitals in the late eighteenth century, lay in its capacity to strip away individual differences, affective and material, so as to perceive the essence of health or disease in organ tissues. The autopsy, not the interview, was the moment of truth; corpses and isolated organs could not speak of pleasures.

The nineteenth century was the great age of the post-mortem, of pathology's ascendancy. During his career as pathological anatomist, Karl von Rokitansky, one of the founders of the discipline, is said personally to have made some 25,000 diagnoses. His department at the Vienna General Hospital performed some 2,000 autopsies a year during his tenure—over 80,000 by this estimate—probably more than had been performed in the entire previous history of medicine.[96] Because of the advent of large teaching hospitals with an almost endless supply of poor patients in most of the major cities of Europe, and because of increasing state interest in the causes of death, the number of bodies and organs available to the medical profession for research was almost unlimited. A new kind of medicine, and the new institutions in which it was practiced, made subjectively reportable states, such as pleasure, of relatively little scientific interest. The state of organs was what mattered, and indeed almost all of the evidence for the reproductive physiology of women prior to the end of the nineteenth century came from the ovaries, uteruses, and tubes removed from the dead or from surgical patients: "I now send for your inspection the ovaries of a young unmarried woman who died a few days ago," wrote the surgeon Mr. Girdwood to his colleague Robert Grant; on July 2, 1832, Sir Astley Cooper sent Robert Lee the ovary of a woman who died from cholera while menstruating; Emma Bull, who had only one period and who died of dropsy on May 23, 1835, was opened in the morning to reveal one smooth ovary and one with a single scar; a twenty-year-old virgin's ovaries showed all the stages of ovulation, thus providing still more evidence, a French doctor thought, for the independence of the process from sexual feeling.[97]

The erasure of women's orgasm from accounts of generation is also not the simple result of male ignorance of, or willful blindness to, female genital anatomy. One of the obstetricians quoted above notes that the clitoris is "strictly analogous" to parts of the penis and that it contributes "a large share, and perhaps the greater part, of the gratification which the female derives from sexual intercourse."[98] The 1836 handbook cited says straightforwardly that the "lower part of the vagina and the clitoris are possessed of a high degree of sensibility" but then claims, with no supporting evidence, that in "*some* women, but not in all" they are "the seat of venereal feelings from excitement" and that "in many women such feelings are altogether absent." Feelings were considered irrelevant to both the "fecundating power" of the male and the "liability of conception" of the female, but our author makes no similar claim about the absence of male pleasure. The argument seems to be that only women have an orgasm—how else does the egg get out?—but do not feel it. They have this capacity, as I reconstruct the argument, because human sexual feelings are under "the intellectual and moral powers of the mind." Civilization in all its political, economic, and religious manifestations mercifully leads mankind from "scenes and habits of disgusting obscenity among those barbarous people whose propensities are unrestrained by mental cultivation" to a state in which "the bodily appetites or passions, subject to reason, assume a milder, less selfish, and more elevated character."[99] In the literature I have examined, women's bodies in particular bear the marks of this civilizing process. The physiology of their bodies—in this instance, in many like it, and most powerfully in Freud—adapts to the demands of culture. Although women, like men, were held to experience erection (both of the clitoris and of the internal organs) excitement, and ejaculation, "many" could somehow do so without feeling anything. Again, the point is not to sort out what is, by modern standards, right or wrong about these propositions, but rather to note that culture and not biology was the basis for claims bearing on the role and even the existence of female sexual pleasure. As in the one-sex model, the body shifted easily in the nineteenth century from its supposedly foundational role to become not the cause but the sign of gender.

If one regards the question of female passionlessness as an essentially epidemiological question, about the correlation between orgasm and ovulation or conception, there was equally little known on either side of the issue. No one before the twentieth century had inquired into the incidence of women's pleasure during heterosexual intercourse and, as Havelock Ellis pointed out in 1903, "it seems to have been reserved for the nineteenth century to state that women are apt to be congenitally incapable of experiencing complete sexual satisfaction, and peculiarly liable to sexual anesthesia." He proceeds to cite scores of studies that purport, on the basis of almost no evidence, to speak to this novel is-

sue.[100] Adam Raciborski, the French physician who claimed to have discovered spontaneous ovulation in women, simply declares that three quarters of all women merely endure the embrace of their husbands, just as William Acton in the midst of his book about men thought that he need do no more to make his case than pronounce, "the majority of women are not much troubled by sexual feeling of any kind."[101]

No one knew the answer. One English writer pointed out in his chapter on "the relative amorousness of males and females" that in a field "so characterized by delicacy and silence," most people "judge others in the light of their own limited experiences." Or, as he might more accurately have observed, according to what they would have liked to believe. His own answer, with no supporting data, is that there are three, roughly equal classes of women: (1) those as passionate and responsive as the average man; (2) those less passionate but still taking pleasure "in sexual congress—*especially just preceding menstruation and immediately following its periodical cessation*"; and (3) those who experience no physical passion or pleasurable sensation and who endure sex out of duty. He concludes, disagreeing with his initial hypothesis, that category two is probably the largest after all, category one the smallest.[102] Otto Adler, a late nineteenth-century German expert on these matters, presents an even less ingenuous case of passing off personal or social prejudice for scientific fact. He concludes that as many as 40 percent of women suffered "sexual anesthesia," among whom he included ten who reported that they either masturbated to orgasm or were subject to unconsummated but nevertheless powerful sexual appetites, and one who actually had an orgasm on the examining table as the good doctor examined her genitalia.[103]

The peculiar problems of research in relating sexual pleasure to reproduction were due not only to biases but to professional politics and to the very doctrines of female passionlessness and delicacy that science was called upon to support. The comparative anatomist and birth-control advocate Richard Owen lamented that all theories of generation were "mere speculation": "Would more time have been spent on collecting the actual experiences of human beings." But such work was too difficult for the ignorant and beneath the dignity, or so they thought, of the learned.[104] A German physician, puzzled over how the ovaries became involved in reproduction, surmised that perhaps "libido" was after all the primary agent. In animals, he reasoned, the ovaries changed in time of heat; from a fellow physician he learned that a colleague's wife had long been barren and "bore the masculine embrace without pleasure" but that "she felt libido once and immediately became pregnant." On the other hand, he also knew from his own practice that women became pregnant without feeling anything. There must be "many supremely interesting confidences" told to doctors by their patients, which if correlated would provide the answer. But, alas, politics and prudery stood in the way of epidemiology.[105] A Sicilian physician reported that patients spoke of nothing so much as sex, but that reporting to the profession on such matters was out of the question.[106]

If the respectable physician had no direct access to information about the sexual experiences of women, they could sometimes report on what the husbands of these women had to say. An English writer with a determined empirical streak did just this. Forty out of fifty-two men said that the sexual feelings of their wives had indeed been dormant prior to marriage. This is no surprising result, given each man's presumed pride in his own awakening powers; more surprising is that fourteen out of the fifty-two husbands reported that their wives continued to feel no sexual desire.[107] Clearly the data are flawed by a less than satisfactory survey technique.

The first systematic modern survey of normal women's sexual feelings was one conducted by Clelia Duel Mosher starting in 1892. Based on the answers of some fifty-two respondents, it was inconclusive. True, 80 percent reported having orgasms, leading one historian to argue against the stereotype of the sexually frigid Victorian woman.[108] But as Rosalind Rosenberg points out, most of the women also reported considerable reluctance to have sex and that they would be happier left alone.[109] In short, almost nothing was known about sexual responsiveness among women in general, much less about its relation to ovulation or conception. (There was perhaps even less known about the sexual responsiveness and habits of men, but that is another story.)

Similarly, the epidemiology of infertility in relation to orgasm remained a cipher. In the old model, an ungendered absence of heat as suggested by lack of sexual desire or orgasm was regarded as a common and remediable cause of barrenness. In the new model, which questioned the very existence of female sexual desire, such matters ought to have been irrelevant. They were not. The first systematic survey on the subject, published in 1884, accepts the ancient account as its initial hypothesis. Matthews Duncan, a well-known London gynecological surgeon, was

convinced that the absence of sexual pleasure was a major cause of infertility. Yet he found that 152 out of 191 sterile women who consulted him (79 percent) said that they desired sex and that 134 out of 196 (68 percent) reported sexual pleasure, if not orgasm, in coition. Without comparable statistics for fertile women, these numbers mean little, but they seem to suggest quite the opposite of his initial hypothesis and also, incidentally, that English women did not merely lie back and think of Empire.[110]

Other than Duncan's survey, there is little except for a few impressionistic reports, all of which support not the new view of passionlessness but the old link between desire and conception. E. H. Kisch, a German specialist and spa doctor, was convinced that sexual excitement in women was "a necessary link in the chain that leads to impregnation." This conviction derived from his research into 556 cases of first pregnancy, which he found occurred seldom after first coition and most often between ten to fifteen months after marriage (a dubious claim) and from his personal experience that an unfaithful wife was more likely to conceive with her lover than with her husband. The inference from date of first pregnancy to the role of passion depended on the more fundamental observation that most women were sexually unawakened until marriage and that their capacity for erotic pleasure flowered slowly. Presumably, pregnancy coincided with full bloom.[111] B. C. Hirst, in a leading American obstetrics text from 1901, repeated the sort of impromptu clinical lore that had been around for centuries: the ideal condition for conception was mutual synchronous orgasm; conversely, in one of his cases a married woman had endured six years of frigid, infertile intercourse but had become pregnant when coitus and orgasm finally coincided.[112] But how this was to be interpreted remained problematic. Commenting on female pleasure, the *Reference Handbook of Medical Sciences* (New York, 1900–1908) casually states: "Conception is probably more likely to occur when full venereal excitement is experienced."

In short, there was almost no specific new epidemiological information available during the nineteenth century on the incidence of female sexual desire or on its relation to conception. Indeed, as the next chapter will show, "moral" causes of infertility and other repercussions in the body of "good order" gone awry make their way into the world of scientific sex.

SIX

Sex Socialized

> The form of representation cannot be divorced from its purpose and the requirements of the society in which the given language gains currency.
>
> E. H. GOMBRICH
> *ART AND ILLUSION*

In this chapter I will offer a series of narratives drawn from the middle of the eighteenth to the early twentieth centuries in western Europe. The first two—about politics and political theory and about the fairly technical question of when ovulation occurs during the menstrual cycle—are intended to show how, in specific contexts, incommensurable, opposite sexes came into being. The second two—an account of why masturbation and prostitution are not so much sexual as they are social pathologies with sexual consequences and a reading of Freud's argument about the transition from clitoral to vaginal sexuality as a case of near universal hysteria—are intended to show the contrary tendency: how the one-sex model with its interpenetration of the body and culture flourished at the same time in other, quite specific contexts. Having argued in Chapter 5 that the two-sex model *was not* manifest in new knowledge about the body and its functions, I will argue here that it *was* produced through endless micro-confrontations over power in the public and private spheres. These confrontations occurred in the vast new spaces opened up by the intellectual, economic, and political revolutions of the eighteenth and nineteenth centuries. They were fought in terms of sex-determinant characteristics of male and female bodies because the truths of biology had replaced divinely ordained hierarchies or immemorial custom as the basis for the creation and distribution of power in relations between men and women. But not all confrontations of sex and gender were fought on this ground, and one-sex thinking flourished still. The play of difference never came to rest.