

# Women and Medicine

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*Holt Parker*

We begin with a myth, a title, and a question. The myth is that of Pandora. Unlike the Hebrew story, where woman is taken out of man (Genesis 2.21–3), in Hesiod’s account (*Op.* 60–71; *Theogony* 570–2) Hephaistos makes woman out of mud. The title is *On the Nature of Woman* (*Peri gunaikeiês phusios*), perhaps better translated as “On feminine nature,” traditionally ascribed to Hippocrates and probably dating to the fourth century BCE. The corresponding title *On the Nature of Man* (*Peri phusios anthrôpou*) is, of course, “On the nature of the human being”; “man,” as always, is the unmarked case. The question is from Soranus, a Greek doctor practicing in Rome (c. 100 CE; 3.1): “Are there conditions/diseases [*pathos*] special to women?” He assembles an impressive array of authorities for and against. This tension—whether women are of one substance with men or a separate creation—runs through all of ancient (and modern) thought.

We also begin with a text, one of the most powerful engines of thought ever assembled. It is the Table of Opposites attributed to Pythagoras (c. 530 BCE) and his followers (Aristotle, *Metaphysics* 986a21–6):

Bounded	Unbounded
Odd	Even
One	Many
Right	Left
Male	Female
Resting	Moving
Straight	Crooked
Light	Darkness
Good	Bad
Square	Oblong

So we note, with little surprise, the traditional yin and yang, with female firmly on the wrong side. Male and female are fundamental opposites, irreconcilable. One is bounded,

self-contained, perfect, complete, unmoving. Female is open, lacking, imperfect, needing to be filled. The dyad is diverse, unbalanced, but can be made stable again (a triangular number) by an addition.

To this set of ideas we can join the associated pairs of

Hot	Cold
Dry	Wet
Solid	Porous
Impermeable	Permeable

(cf. Plato, *Phaedo* 86b; Lloyd 1964). This is all neatly summed up by Aristotle (*PA* 2.2 648a9–18):

Noblest of all [sanguineous animals] are those whose blood is hot, and at the same time thin and clear. For such are suited alike for the development of courage and of intelligence. Accordingly, the upper parts are superior in these respects to the lower, the male superior to the female, and the right side to the left.

## 1 Women as Objects of Theory

The philosophers and doctors (and often we should make no sharp distinction between them) needed to account for two intertwined things: the existence of women and the birth of girls; that is, the causes for the physical differences between men and women, and the reasons why half of babies are born male and half female. For the first question, though there are many differences among medical and natural philosophical texts spread over a thousand years and at least two languages (Flemming 2000: 114–16), one can sketch out a common set of beliefs and practices held by men and women, elite and common, educated and not. In particular, the Pythagorean Table of Opposites provided an interconnected system of images for both theory and practice that lasted well into the Early Modern period and has lingering effects today.

### *Women Are Cold*

Already in the Presocratics, heat distinguished men from women. Empedocles (c. 493–c. 433) said that men were naturally hotter than women (fr. A81, B65, B67). There was some early debate on this point. Women were thought to have more blood in them—obviously—and menstruation was thought to be caused by an excess of hot blood (Hp. *Mul.* 1.1). Parmenides agreed (fr. A9). But a consensus soon developed. The full theory is set out most systematically in Aristotle, for whom “destiny is anatomy” (Laqueur 1990: 25). In outline: the primary difference in living things is the amount of heat they contain and that went into their making. The body condenses by a type of cooking (*pepsis*). So nature proceeds down a scale of lessening heat: from men to women to animals to plants (e.g., *HA* 588b4–589a9; *PA* 681a12–28; *GA* 732a12–733a18; *Metaph.* 1058a29). Thus, “women exist by a sort of inability” or weakness (*GA* 728a17, 775a15). The female is a type of mutilated male (737a28), like eunuchs (766a25–30, 784a6–9), incomplete and deformed. But, says Aristotle, nature does nothing without a reason. Therefore, women’s incompleteness is a *necessary* deformity, necessary for the continuation of human life (767b7).

Aristotle shows how this necessary deformity works in his theory of reproduction— itself a decoction of previous conceptions (*GA* 721a30–730b31). Men’s greater heat cooks the residue of nutrition into sperm (white, foamy, airy, charged with *pneuma* (air/breath)). Women’s lesser heat cooks this residue only as far as menstrual blood or milk. Accordingly, there is no female seed. Women contribute to birth but only by providing raw matter, while the male provides the life-giving animation. When Apollo makes his defense of Orestes in the *Eumenides* (658–61), he is drawing on an already very sophisticated science:

The so-called mother is not the begetter of the begotten,  
but the nurse of the new-sown swelling.  
He who mounts, begets, but she like a stranger to a stranger  
preserves the shoot, if a god does not prevent it.

And so we have reached the master—in the most literal sense—trope that Aristotle announced early on in the *Politics* (1251a5–16, 1254a26–1254b14). In the ladder of hierarchies, male is to female as soul is to body. Male is the spirit, impregnating female matter. Male imparts life and motion (*GA* 716a4–7, 727b31–4, 729b15–21, 765b8–766a36). Thus, the male can usurp the female function of conception and birthing. Here we can see clearly the objectification or reification of woman. Woman is a thing to be animated.

Aristotle’s consolidation of the dominant theory shows “a characteristically Greek combination of polarized thinking and inadequate attention to empirical evidence” (Cartledge 2002: 83). Contrary facts are ignored, or else subject to convenient reinterpretation (e.g., *HA* 538a22). Women must be inferior to men. So, three examples:

1. Women must have fewer sutures in their skulls, since men have bigger brains and so need more ventilation (*PA* 653a27–29, 653b1–3).
2. Women must have fewer teeth (*HA* 501b19). That this is not so, Aristotle could have discovered, in Bertrand Russell’s memorable phrase, “by the simple device of asking Mrs. Aristotle to keep her mouth open while he counted” (1950: 135).
3. Menstruating woman must turn a mirror dark (*Parv. Nat.* 459b–60a).

We find the last two repeated by Pliny the Elder 400 years later (*HN* 7.71, 38.82).

To this theory, Herophilus (c. 330–260 BCE) and Galen (129–c. 215 CE) added refinements. In essence, males’ extra heat causes their sexual organs to pop outside. Galen explains (*UP* 14.6–7 = 2.296–7 H):

Therefore it is no wonder that the female is more incomplete than the male to the extent that she is colder. Just as the blind mole rat has incomplete eyes . . . so too woman is more incomplete than man in the generative parts. For the parts were formed within her when she was still developing in the womb, but they were unable to peep out and emerge on the outside because of a weakness in the heat. This produced a creature more incomplete than one that was complete in every part, but it offered no small advantage to the whole race, for it is necessary that something female exist. For you mustn’t think that the creator would deliberately make half of our entire race incomplete and as it were mutilated unless there would be some advantage from this very mutilation.

(cf. Soranus 1.16; [Galen] 14.719; text of De Lacy 1992)

As Galen said, this fact is obvious and known to everyone, and better thus (*UP* 15.1 = 2.337 H).

### *Women Are Wet*

*A dry soul is wisest and best.*

(Heraclitus fr. B118)

Hippocrates, in the first chapter of *Diseases of Women*, set out his theoretical basis for the treatment of women (1.1):

I say that a woman is more porous [loosely-textured] in her flesh and softer than a man: since this is so, a woman's body draws up more moisture from the belly and faster than a man's.

There follows a thought experiment (derived in part from tests for moisture in soil): a porous skein of wool, like a woman, will draw up and absorb more water than a tightly woven piece of cloth (i.e., a man). Such analogical thinking drove most of ancient medicine (Lloyd 1966). The Hippocratic *Glands* 16 repeats this basic analogy and gives a fascinating picture of how women's bodies work:

Women's nature is porous in the glands [here the breasts], as in their entire body, and they change the nourishment which they draw up into themselves into milk. It passes from the womb to the breasts and into the nourishment for the child after birth.

As Dean-Jones (1994: 56) states, "The body of a mature woman was one big gland." *Nature of the Child* 15 states this as a simple fact: "The body of a woman is wetter than a man's, and when the blood is agitated and the veins are full, it comes out, and this is due to her original nature."

Cold and wet are often associated (Lloyd 1964). So one of the *Problems* (4.25, 879a31–5) that stemmed from Aristotle's school ponders this fact, well-known to Hesiod (*Op.* 586), Alcaeus (347a), Hippocrates (*Aer.* 10), Aristotle himself (*HA* 542a32), and Pliny the Elder (*HN* 10.172):

Why in summer are men less able to have sex but women more so? . . . Man is hot and dry but woman is cold and wet. So a man's ability fades but theirs blossoms because it is balanced by its contrary.

The Hippocratic *Diet* agrees on the polarity (1.27 and 34):

The female is based more on water and grows with things cold and wet and soft, in food or drink or activities. The male is based more on fire and clearly grows with things dry and hot, in food and the other aspects of life-style. Therefore if one wishes to beget a female, one must use a diet based on water; if a male, one must engage in activities based on fire. . . . In general, the male is hotter and drier, the female wetter and colder not only because at the beginning each was engendered/grew in their respective conditions, but once they were born the male makes use of a more hard-working life-style, so that he gives off heat and is dried out, but the female uses a wetter and more carefree life-style, and makes her purgation [*katharsis*] of heat from her body every month.

The idea runs through the history of medicine. So, around 100 CE, Rufus of Ephesus takes it as a matter of course: “Everyone would agree that women’s bodies are wetter and colder” (in Orib. *inc.* 2.1–2).

### Women Are Sinister

*The right is naturally better than left.*

(Aristotle, *Progression of Animals* 706a20)

In more ways than one. The association of male with right, female with left, is of a venerable antiquity (Parmenides fr. B17; Anaxagoras fr. A107; Pythagoreans generally by Aristotle, *Metaph.* 986a23–b5; Pliny, *NH* 7.37; see Lloyd 1966: 42, 73–4, 1983: 36, 176; Hanson 1990: 44–6; Dean-Jones 1994: 44, 167). Females are generated *from* the left side of the body. So, Hippocrates recommends (*Superf.* 31):

If one wants to beget a male child: have sex when the periods are tapering off or gone; thrust as vigorously as possible until ejaculation. If one wants a female: when the periods are at their heaviest in the woman or still coming on; tie up the right testicle so it is held up as high as possible. If one wants to beget a male, tie up the left one.

One should presumably therefore take one’s time for a female (cf. *Epid.* 6.4.21; *Aph.* 5.38; Aristotle, *GA* 765a11–27; *Dsc.* 3.126; cf. [Galen] 14.476; Aetius 16.34: quasi-magical).

Females are also generated *on* the left side. There was an unshakeable belief that the womb had two chambers or at least sides (probably influenced by the bicornuate uterus of most mammals). The right pocket produced males; the left, females (Parmenides fr. B17; Hp. *Epid.* 2.6.15, 6.2.15, *Aph.* 5.48 (frequently quoted by Galen) and cf. 5.38, *Prorrh.* 2.24). Or, if not separate compartments, then a literal inclination: male fetuses to the right, female to the left, since (as everyone knows) the right side of the body is hotter than the left (Aristotle, *GA* 4.1.765b2; *PA* 670b17–22). Soranus (1.45) argues against this idea.

### Women Are Permeable

Or, as Carson puts it, “women leak” (1990: 153). Unlike the male, who is one/bounded, the female is multiple/unbounded. *Diseases of Women* took as its starting point the idea that women’s flesh is more porous. There is an important conceptual difference between the three most important “holes” in the body; two, the mouth and the anus, can be closed voluntarily. But the vagina stays open. Women leak—menstrual blood, sexual lubricant, lochial discharge after giving birth, and yeast infections (leucorrhoea).

The principle verb of female physiology is *reo* (I flow). The image of woman as leaky resonates throughout Greek literature. Carrying water in a sieve is the eternal punishment for the husband-murdering Danaids (Carson 1990: 155). Plato uses this myth in *Gorgias* (493b): the soul is a jar (*pitbos*) but in the ignorant “the part of the soul where the desires are, the unrestrained and leaky part, he [an unnamed Pythagorean] compared to a perforated jar [sieve], because it cannot be filled.” The weak, leaky, ignorant, or feminine soul is like the weak, leaky, feminine body.

This view of the female body led to numerous attempts to “seal” it, or imagine it as sealed. There was no clear understanding of the hymen; instead, various membranes, variously located, were thought to block the womb (Hanson 1990: 324–30; Dean-Jones

1994: 50–4). Here, too, myth sets the pattern in Hesiod’s retelling of the ancient Near Eastern story of how Heaven (Ouranos) sealed Earth’s vagina with constant intercourse and was castrated by his offspring Kronos from within Earth’s vagina (*Theog.* 156–82). The most common therapy for “female complaints” was constant intercourse followed by constant pregnancy (see below).

Thus, a spell to lock a woman’s vagina (*Papyri Graecae Magicae* XXXVI.283–94, fourth century CE) meets with numerous medical recipes to dry up and tighten the vagina (e.g., Hp. *Mul.* 10, 17, 18), a state thought to be characteristic of virginity. So, there are recipes to restore that dry appearance ([Gal.] 14.478, 485–6; Aspasia in Aet. 16.66; Metrodora 25). There seem to be no recipes for vaginal lubrication.

### Women Are Hollow

It was not Pandora’s box; Pandora had a jar, specifically a *pithos* (Hes., *Op.* 94), the wide-mouthed storage pot that Plato made the analogy of the soul and the doctors made the analogy of the womb (Hp. *Mul.* 1.33, *Genit.* 9.3, *Epid.* 6.5.11). Two remarkable images show the way that the womb was visualized as an upside-down jar. Some twenty manuscripts of the Latin translation of Soranus made by Mustio (c. 500 CE?) preserve copies of the late Antique illustrations of the womb as jar. The best is the ninth-century copy in Brussels (Bibliothèque Royale de Belgique, MS 3701–15, fol. 16v). The parts are neatly labeled and the image determined our own medical vocabulary: *fundus*, “bottom” (paradoxically for the top of the uterus); cervix, “neck”; *orificium/os*, “mouth” (cf. Soranus 1.9; Rufus *Onom.* 193–8). The Kelsey Museum (26067) displays an amulet from the third century CE showing the womb as inverted jar, with the god Khnoum approaching with a key to lock the open womb so that the engendering seed will not flow out (Hanson 1990: 325). The author of the Hippocratic *On Ancient Medicine* (22) compared the womb to a suction cup (cf. Soranus 1.9; Galen *Sem.* 4.516.1).

Many sources also show traces of a somewhat inchoate idea that the vagina/womb somehow communicated with a mouth, either diffusely through women’s porous flesh or perhaps via a tube or some other kind of direct connection between the upper mouth and lips (*labia*) and the lower mouth and lips (*labia*)—that, in essence, a woman was “an uninterrupted vagina from nostrils to womb” (Manuli 1983: 157). Many of the tests for fertility depend on this idea: something strong-smelling is placed under or in the woman’s vagina. The ability to smell it on her breath indicates fertility (Lloyd 1983: 83; Manuli 1983: 157; King 1989: 22–3, 1994: 72–3, 1998: 28–31; Carson 1990: 153–60; Hanson 1990: 317–18, 1992: 239–40; Dean-Jones 1994: 72–3). These tests probably originated in Egypt but are found in Hippocrates (*Aph.* 5.59; *Mul.* 146; *Ster.* 214, 219, 230; *Superf.* 24; cf. *Nat. Mul.* 7), Aristotle (*GA* 747a7–15), Metrodora (33), and Aetius (16.7, said to be from Soranus). Soranus, however, criticizes this idea and its practitioners (1.35).

Fluids leak not only out of women but within them. The permeable nature of the female body allows mucus from the nose to flow directly down to the womb, impeding conception (Hp. *Mul.* 10, 11, 25; Metrodora 20). Fluids can travel up: blood from suppressed menses can appear as a nosebleed or vomit of blood (see below).

*Women Are Unstable*

*Any excuse is sufficient to displace the womb, if it has any weakness.*

(Hippocrates, *Diseases of Women* 138)

And so back to the Pythagorean Table of Opposites and resting/moving, women as jars and tubes. But there are two other powerful analogical models for woman and her womb. The most enduring image is the womb as animal. Both men and women, in Plato's account, have a living creature (*zōion*) inside us that drives us to sex (*Tim.* 91a–c). But the one in women is especially troublesome:

In turn, in women, because of the same things, the womb or what is called the uterus, an animal (living creature) inside that desires making children, when it is without fruit long beyond the best time, gets upset and takes it hard. It wanders everywhere through the body and blocks up the ways out for breath and does not allow her to inhale, and so it throws her into extreme difficulties, and causes all kinds of diseases; until the desire and love of each of the sexes brings them together then.

Men's animal was quickly forgotten but the hysteria caused by the animal-womb, "womb-disease," lived on (for surveys see Simon 1978; Lefkowitz 1981; Manuli 1983: 149–204; Hanson 1990: esp. 319–21; Gilman et al. 1993; Dean-Jones 1994: 69–77; Micale 1995; Föllinger 1996; Gold 1998).

So, we have from Aretaeus of Cappadocia (second century CE; *Causes of Acute Diseases* 2.11):

Hysterical suffocation. Between the flanks of women lies the womb, a female organ, closely resembling a living animal; for it is moved by itself here and there in the flanks, also into the upper parts vertically to below the cartilage of the thorax [i.e., the floating ribs], to the sides on the right or left, either to the liver or spleen; it also goes straight down to the lower parts, and, to put the matter briefly, it is given to wandering everywhere. It enjoys smells and shoots towards them; and it hates bad smells, and runs away from them; and in sum within a human being the womb is like an animal within an animal.

It is a well-known fact: the womb wanders about in women's hollow bodies and bangs into various organs. Doctors cured it; magicians lured it (Hp. *Mul.* 123–31, 137, 201, 203; *Nat. Mul.* 3, 44, 48, 58, 62; *Loc. hom.* 47; Metrodora 1–3; Aret. 2.11; Aet. 16.67–67bis; Paul. 3.71; for magic, Faraone 2003). The womb is thirsty; it needs moisture, and so will rise to the moister parts above (Hp. *Mul.* 7). It is hungry; it needs sperm. It sucks in seed, absorbs it (Hp. *Mul.* 18, 24, 137, 146, 166; *VM* 22; [Arist.] *HA*10. 634b33–5, 35a25, 36a5, 37a4, 37a15–30; cf. Aristotle's explicit denial of this idea in *GA* 737b28–32, 39b16–20). Men can actually feel the womb's suction in intercourse (Galen 4.515.18–516.1). It closes on male seed, and digests it (Hp. *Mul.* 1.24, *Genit.* 5; Soranus 1.10). The womb has a mouth: it opens, closes, and conceives the seed; or, if conception fails, the womb "vomits" it out (cf. Soranus' image of the womb as a stomach at 1.36, 1.43, 1.46, 1.47; so, too, Galen, *Sem.* 4.523.10–524.3 and the long comparison at *Nat. Fac.* 3.2–3). There was a widespread belief that women knew almost immediately when they had conceived, a belief shared by women (Hp. *Nat. Puer.* 13.6), that they could actually feel when the mouth of the womb closed (Aristotle, *HA* 582b10–12, 583a35–b3, 584a2–12; Soranus 1.44; Galen, *Nat. Fac.* 3.3, *Sem.* 4.514; Aet. 16.8). If they were dry

and nothing flowed out, ideally for seven days, conception had taken place (Hp. *Septim.* 7.448.2–4, *Genit.* 5, *Mul.* 1.10–12, 16, 220; *Carn.* 19; Aristotle, *GA* 758b5–6, *HA* 583a25–7, 83b10–15; Soranus 3.47; Galen 4.542–3, 17A.445, 799).

Hysteria is especially common, says *Diseases of Women* (7), “in those who do not have intercourse with men and with the older more than the younger” (cf. *Mul.* 127, 137; cf. *Nat. Mul.* 3; Metrodora 2; Paul. 3.71.1). The notion that women without men, without regular intercourse and pregnancy, are particularly susceptible to diseases of the womb is fundamental to ancient medicine and philosophy (e.g., Aristotle, *HA* 582b23–5), and still has adherents. The social “fact” is given two primary physiological explanations. First, according to *Diseases of Women* (2, 6–7), the womb is naturally dry, light, and hollow. Unless it is kept moist, preferably by intercourse, or made heavy, preferably by pregnancy, it will tend to rise in the body (cf. *Nat. Mul.* 2, 3). The womb was more likely to move once a woman’s internal passages had been opened up (by intercourse, childbirth, lochial discharges) if they were not kept regularly full (by intercourse, childbirth, and lochial discharges) (Dean-Jones 1994: 72; King 1998: 71).

Aristotle disagreed (*GA* 720a12–24 of animals in general; contrast *HA* 10, 582b22–6), as did Galen. Though Galen shows some traces of the view of the womb as an animal, he puts hysteria down to retention of fluids (cf. Paul. 3.71), primarily semen (both male and female) or menstrual blood. Yet, the proximal cause, the cure, and the victims are all the same. The principle cause of hysteria is lack of intercourse. Thus, widows are especially susceptible, “when they previously had healthy menstruation, got pregnant, and had sex with their husbands but now are deprived of these things” (Galen 13.319–20; cf. 8.417, 420, 424, 432, 16.178; cf. Aet. 16.87). As proof, Galen relates a case where a widow suffering from hysteria is treated with warming medications (presumably in tampon form). She feels (as she said) “pleasure similar to that in intercourse,” has an orgasm (*sunolkai, taseis*), secretes a great deal of thick, retained female semen, and so is cured (*Loc. Aff.* 6.5 = 8.420 K; cf. *Sem.* 4.599 K; [Aristotle] *HA* 10, 636b25–33). Such a story was too good to waste: Aetius repeats it as his personal experience (together with Galen’s physiological comments; 16.67; see Debru 1992).

Even Soranus, who dismisses the wandering womb as silly nonsense (3.29), accepts hysteria as a disease, usually preceded by long widowhood (3.26), but he notes other causes, including miscarriage, giving premature birth, retention of the menses, menopause, and inflation of the uterus, which are not related to a societal norm of intercourse (in fact, contra-indicated) and pregnancy.

Yet, it seems that, whatever theory is used to explain it, hysteria is the body’s revenge on women who fail to fulfill their natural roles (see King 1983; Manuli 1983: 189; Hanson 1990; Dean-Jones 1994: 28, 47–55, 69–77; King 2004): “The womb in its wandering behaves like insane women in myth . . . Male attention, therapeutic or punitive, is needed to restore the insane women to society, or the dislocated womb to its normal function” (Lefkowitz 1981: 16–17).

## 2 The Role of Women in Reproduction

But did they even have a role, beyond that of a passive field for sowing? This analogy was not merely the sophistic reasoning of Anaxagoras and other philosophers (Aristotle, *GA* 763b31–3), the morally bankrupt Creon (Sophocles, *Antigone* 569), and a specious god, but of the Athenian marriage ceremony (*Men. Dys.* 842–3). The role of male seed is

obvious, but the ancients were deeply divided on the question of what, if anything, women brought to conception (surveys of opinion at Censorinus 5.4; Aetius [Plutarch], *Plac.* 905d4–f6; Lloyd 1983: 86–94). The various answers are marked by alternations of presupposition, prejudice, and honest attempts to make sense of the fact that babies are born evenly male or female, sometimes resembling one parent, sometimes the other.

Closely tied to the search for female seed was speculation about what fluid in woman corresponded to semen in men, which was tied to a hopeful search for female ejaculation. Aetius [Plutarch] devotes a section to it (5.5, 905b8–c7; cf. Aristotle, *GA* 727b34–28a37, 764a8–12):

5. Do females also emit (προϊημι) seed?

Pythagoras, Epicurus, and Democritus: the female also emits seed, she has spermatid ducts but they are turned in the wrong direction; and so she too has desire for sex.

Aristotle and Zeno: she emits a wet substance, like sweat from exercise; but it is not fully cookable seed.

Hippocrates: females emit seed no less than men, but it does not contribute to procreation, because it falls outside of the womb; and therefore some women often emit seed without men, especially widows. Also bones are from the male, flesh from the female.

Pseudo-Aristotle (*HA* 10, 636a25–37b7), too, in a confused passage imagines that women “emit/ejaculate” not just in the womb but in the vagina, just outside the mouth of the womb (cf. Soranus 1.12, citing a lost “On Seed”). Further:

The path, through which it comes out, is made like this in women. They have a tube (*kaulos*), just as men have genitals, but inside the body. They blow out through this by means of a small opening just above the place where women urinate. Therefore whenever they are ripe to have sex, this place is not the same as it was before they were ripe. From this tube there is an emission.

Here the clitoris makes one of its infrequent appearances (Ruf. *Onom.* 111; Soranus 1.18), with Pseudo-Aristotle remaking it in the image of the penis, while Aristotle himself uses the fact that women emit moisture from a different place (just outside the womb) than the one in which they feel pleasure (“by touch in the same place as in males”) as proof that this moisture is *not* seed (*GA* 728a32–34; Dean-Jones 1994: 31, 79, 158). Later authors take “gonorrhoea” (“flow of seed”) as common to men and women, treating vaginal discharges (yeast infections, etc.) as equivalent to sperm (Gourevitch 1995).

Various combinations of male and female seed were tried, of which Empedocles’ theory, glimpsed through Aristotle, is the most intriguing. One seed produces one plant. How then can there be two seeds to make one baby? A sensible objection (especially if we remember that the mammalian ovum was not discovered until 1826 by Karl Ernst von Baer). Empedocles thinks that father and mother each provide a tally, a *symbolon*, two pieces that fit together (frs. 57, 63; Aristotle is opposed: *GA* 722b7–27, 764b4–20).

One of the most thoroughly thought-out of the two-seed theories is that of the Hippocratic *On Seed* (*Genit.* 4–6; cf. 8–9; *Nat. Puer.* 12, 31; *Morb.* 4.32; *Vict.* 27–8, 32):

In women: I say that in intercourse when the genitals are rubbed and the womb is moved, a sort of itching occurs in it and pleasure and heat take hold of the rest of the body. A woman also

releases something from her body, sometimes into the womb, which becomes moist, sometimes also outside, if the womb gapes open more than it should. She has pleasure, once she begins to have intercourse, throughout the whole time, until the man also releases something. If she is ripe to have intercourse, she emits before the man, and for the rest of the time the woman does not continue having as much pleasure. But if she is not ripe, then she stops having pleasure at the same time as the man. . . . The pleasure and the heat flare up when the [female] seed drops into the womb, and then they cease. . . . This is also the case with women: if they have intercourse with men, they are healthier; if not, less healthy. For two reasons: first, the womb becomes moist during intercourse and not dry; if it is drier than it should be, it clenches together powerfully, and when it clenches together powerfully it causes pain to the body. Secondly, at the same time, intercourse by warming and liquefying the blood makes an easier path for the menstrual fluids, and if the menstrual fluids do not move, women's bodies become prone to illness.

He continues: both male and female emit stronger (male) seed and weaker (female) seed. Strong + strong = boy; weak + weak = female. Lots of strong + little weak = boy; lots of weak + little strong = female. This fairly closely matches Empedocles' view, substituting hot for strong and cold for weak (Cens. 6.6–7), and passes to Lucretius (4.1192–232). What determines when a man or woman emits each kind of seed and in what amounts, the authors do not say.

Hippocrates' *Diseases of Women* 24 agrees: "When women have finished having their periods, they conceive (hold in the belly) especially when they feel desire." This view, that seed in women is proven by their pleasure in sex and the attendant view that female pleasure and orgasm were essential to successful procreation, is seen in [Galen] 19.450 and [Aristotle] *GA* 10 (636b10–39, 637b27–35) (who, indeed, wants the woman to come first, and points to a belief held by women that simultaneous orgasm is best). Even those who did not believe that women had fully functioning seed agreed that female pleasure was necessary for conception (Soranus 1.12, 1.37; Galen 7.127.3–11; *UP* 14.9–11). Aetius said (16.26): "It is a hindrance to conception when a woman is forced or unwilling to have intercourse with her husband, for a woman who is in love (*agapē*) makes the seed fit together and because of this fact intercourse with passion (*erōs*) produces children much faster."

If a woman must eject seed at orgasm into the womb in order to get pregnant, then women's sexual pleasure is important, if only as a matter of pronatalism (Hanson 1990: 315). Even Aristotle says that feminine pleasure plays a subordinate (non-seminal) role (*GA* 739a20–35). This would seem to be a good thing (Rousselle 1988: 27–9), but the theory has profound social consequences. Soranus writes (1.37) that the best time for fruitful intercourse (he does not consider any other kind) is when "the urge and desire for intercourse are present." He makes an analogy:

For just as it is impossible for seed to be ejaculated by males without the urge and appetite, in the same way it cannot be taken up (conceived) by females without the urge and appetite. Just as food swallowed without appetite or with a certain revulsion is not well assimilated and fails its subsequent digestion (*pepsis*), so the seed cannot be taken up or if it is seized cannot be carried to term without the presence of the urge and appetite for intercourse.

He then answers an unspoken objection:

Even if some women have gotten pregnant from being raped, we should rather say in their case that the sensation (*pathos*) of appetite was in fact present in them as well, but it was blocked by mental judgment.

Soranus compares such women to grieving women who are hungry but do not realize it. That is, they enjoyed it even if they didn't know it. Their bodies said "yes," even if their minds said "no."

### 3 Women as Objects of Practice

*The so-called "womanly diseases": The womb is the cause of all these diseases.*

(Hippocrates, *Places in Man* 47)

#### *Diseases*

Women carry within them the pathogenic organ of the womb (cf. Aret. 4.11.1: "The womb is the source of countless severe diseases"; Cels. 4.27.1). So, nearly all discussion of women and their nature is inherently pathological. It is one of the remarkable features of ancient medicine and society that nowhere does any authority speak directly about what women did during normal menstruation (*Mul.* 11 mentioned rags only as a test; one exception might be the legend about Hypatia disabusing a young man of his infatuation by showing him her "feminine rags" in *Suda* v 166; perhaps hinted at by Lucr. 4.1174–84).

Numerous failings can affect the womb: it can become "cold, fluid, or haemorrhagic, inflamed, distorted, constricted, lax, inflated or swollen, closed, ulcerated, fistulated, subject to growths or malignancies, indurated, pained, irritated or prolapsed" (Flemming 2000: 173, with examples of each). Any of these states can befall other organs, but the womb is unique in its superabundance of diseased states. The ultimate cause is women's moist, cold nature, what Gourevitch (1984) called "Le mal d'être femme" (the disease of being a woman). Women suffer, in Hanson's phrase (1990: 317), from "drainage problems." There are therefore three principle diseases of women: hysteria, "retention of the menses" (too little liquid purged), and "fluxes" (too much).

#### *Hysteria*

Hysteria, the "womb disease," might properly be limited to the attacks that come from the womb's movement in the body (King 1993, 1998: 205–46; Galen makes the same point: 17b. 824–5), but, as the doctors themselves stress, the womb is the source of all female complaints, and hysteria, displacement, and prolapse are not rigorously separated. The womb is metonymy for woman. Women are mobile currency—symbolic counters exchanged by men between households. But they need to be fixed. They are in constant danger of wandering outside, but, when held in their proper place, wet with semen and heavy with child, they are beneficial (Lefkowitz 1981). Accordingly, the best cure is intercourse followed by pregnancy (see, e.g., Hp. *Mul.* 1–7, 119, 121, 127, 137, *Nat. Mul.* 2, 3; Aristotle, *HA* 582b23–5; Galen 13.319–20, cf. 8.417, 420, 424, 432, 16.178; Aet. 16.87; Lefkowitz 1981; Manuli 1983: 189; King 1998: 69, 219–20, 232; Fleming 2000: 117).

In the absence of sexual healing, the womb can be lured back to its proper place by a carrot-and-stick application of sweet and unpleasant smells. Aretaeus (2.11) makes the rationale explicit, as does Soranus in inveighing against it (3.29) while still adapting parts of it. That the Hippocratic corpus seldom explains the underlying rationale does not mean that they had abandoned it (contra Hanson 1998). Thus, for a womb that has ascended to

the diaphragm and liver, sweet substances are applied to the vagina (often in the form of wool tampons) while bad-smelling substances are applied to the nostrils. For a womb that has descended, the order is reversed. Fumigations were usually applied by means of a small pot with a pierced lid and attached tube or by a form of sweat bath, where the woman was placed on a stool over the burning materials and then draped with a blanket to keep in the vapor. For descriptions of fumigations and the devices involved, see Hp. *NW* 34, 107; *Mul.* 51, 75, 133, 195, 206, 230; *Superf.* 34; *Loc. Hom.* 47; Soranus 4.14 (citing Straton the follower of Erasistratus); Antyllus in Orib. 10.19; also Pliny *NH* 28.110.

### *Retention of the Menses*

*When the menses do not flow, women's bodies become sick.*

(Hippocrates, *Seed* 4)

A different form of apoplexy afflicts young women. Everybody knows that virgins are especially subject to a form of hysterical attack, later called *chlorosis* (Shakespeare's "green sickness"), that drives them to hang themselves (Hp. *Virg.*; Plut. *Virt. Mul.* 249b–d). Some blame the gods, others a poisonous atmosphere, but the doctors know the true explanation: after menarche, the menstrual blood pools in the womb, but, since the vagina has not been opened up and straightened out by intercourse, the excess blood flows unnaturally upward towards the heart, lungs, and diaphragm (the *phrenes*, considered the seat of the intellect), causing numbness and eventual insanity. The therapy is to open up the passages so that the blood can flow. In King's memorable phrase, women are "bound to bleed" (1983). Again, the cure is intercourse and pregnancy as quickly as possible (cf. *Mul.* 2, 127; Soranus 1.31; Flemming and Hanson 1998; King 1998: 188–204, 2004).

Menstruation is women's natural way of purging their moist *physis*. The ancient doctors, however, were ignorant about the most basic facts of menstruation, and held varying opinions: menstruation normally occurs every month (Hp. *Mul.* 25, *Oct.* 1, etc.), occurs every three months (Aristotle, *HA* 582b3–4), occurs in all women at the same time as the moon wanes (Aristotle, *HA* 582a34, *GA* 767a2–6, 783a16; Galen 9.903; denied by Soranus 1.21), occurs on the exact same days each month (Hp. *Pror.* 2.24), could occur after conception (*Mul.* 25, *Aphr.* 5.60), consisted of an amount of two Attic *kotylai* (about 544 milliliters; in fact, the mean in healthy women is forty milliliters, with eighty milliliters as the upper normal limit over two to three days) (*Mul.* 6; Soranus 1.20). In short, nearly any form of menstruation could be classed as diseased (Hp. *Aphr.* 5.62, *Mul.* 2, 62).

Retention of the menses, then, is less a symptom than a disease in itself (Dean-Jones 1994: 125–35), and the cause of nearly every other disease (Hp. *Mul.* 1, *Genit.* 4), from headache (Hp. *Mul.* 18, *Epid.* 5.12; Rufus and Aspasia in Act. 16.50) to gout (Hp. *Aph.* 6.29; Galen 11.165). The later handbooks devote entire sections to the disease (Soranus 3.6–16; Orib. *Ecl.* 146, *Syn.* 2.53; Paul. 3.61; Act. 16.50).

The blood builds up and tries to escape. It blows out in abscesses (Cels. 2.8.7: "the bloodier, the better"), hemorrhoids (Hp. *Mul.* 2, *Coac.* 511), spitting up blood (*Mul.* 2, *Aph.* 5.32, *Morb.* 1.7; Aret. 2.2.9), through the breasts (*Mul.* 133), and especially nosebleeds (Hp. *Aph.* 5.33, *Epid.* 7.123; Aristotle, *HA* 587b35–88a2; Soranus 3.7; see King 1989: 24, 1994: 108, 1998: 14–15, 58–60). We are given, by Aspasia, a detailed physiology of how retention of the menses leads to uterine displacement (in Act. 16.72; see below): the blood that would ordinarily flow into the womb pools in the surrounding arteries, veins, and ligaments of the womb. They become full and sodden, rounder and less long, and so pull the entire womb up, down, left, or right (cf. Galen 8.426).

Dioscorides lists hundreds of plants and other drugs as emmenagogues, and there are numerous recipes (e.g., Hp. *Mul.* 74, *Nat. Mul.* 32; Dsc. *Eupor.* 2.79–80; Orib. *Syn.* 1.22, 2.53). Some scholars have thought that these refer euphemistically to abortifacients (see below). In fact, emmenagogues were thought to serve both conception and contraception (Flemming 2000: 162–3). The best moment for conception was as one’s period was waning, and getting one’s period was an essential precondition for getting pregnant (Hp. *Mul.* 17, *Nat. Puer.* 15; Aristotle, *GA* 727b10–25, *HA* 582b11–12). So, Soranus (3.9) prescribed things to restart the menstrual flow for women who wanted to conceive. Doctors made a distinction between emmenagogues and abortifacients, but noted that, because of their expulsive properties, the things good for the one will be good for the other (as well as expelling the placenta and moving the lochial discharges; e.g., Hp. *Nat. Mul.* 32; Soranus 3.12; Orib. *Ecl.* 142–43; Paul. 3.61).

The Hippocratics generally were not in favor of bloodletting in cases of retention of the menses (Dean-Jones 1994: 142). But this type of artificial evacuation was eagerly promoted by Galen as a cure-all. He recounts a failure by the followers of Erasistratus in contrast to a case history of his own (11.188–190, 17b.81) where he cured a woman who had not menstruated for eight months. Soranus recommends bloodletting in stubborn cases (3.11).

#### “Flows”

*A certain woman, which had an issue of blood twelve years, and had suffered many things of many physicians, and had spent all that she had, and was nothing bettered, but rather grew worse.*

(Mark 5.25–26)

The opposite plumbing problem is too much flow: “If the periods are too much, diseases occur; if they don’t happen, diseases occur in the womb” (Hp. *Aphr.* 5.62). The classifications and definitions of the various discharges were a matter of some debate, which can be followed in Soranus (3.43–4; see Archigenes ap. Act. 16.63–5; Aret. 4.11; Orib. *Syn.* 9.46–7, *Eunap.* 4.111; Paul. 3.63). The unsystematized mass of Hippocratic medicine operated with basically a three-fold division (*Mul.* 110–11) of white (116, 117), red (110, 113), and yellow-red (*pyrros*, 115). Asclepiades (of Bithynia; fl. c. 90–75 BCE in Rome) established the canonical two classes of red and white (Soranus 3.43). Pseudo-Galen (*Def. Med.* 19.429) had four, one for each humor. Galen had five (7.265). Demetrius of Apamea, the follower of Herophilus (fl. 110–90 BCE), had seven. Soranus rejected the subtle subdivisions of Demetrius, while keeping his broader definition. It is clear that ancient medicine was lumping together the productions of various infections, ulcers, and tumors under the same symptom (see on “gonorrhoea” above).

#### Cancer

Uterine cancer takes up surprisingly little space in ancient gynecology, particularly so in Hippocratic medicine, where it is mentioned only three times, almost certainly because most of the symptoms of a deep, non-observable uterine cancer, such as cessation of menstruation, bleeding, vaginal discharge, etc., are treated under the heading of different diseases, or else as separate diseases in themselves, such as suppression of the menses. For the sources see Hp. *Epid.* 7.116, *Nat. Mul.* 31, *Mul.* 40, 159; Archigenes ap. Act. 16.106 (cf. 16.119); Galen 17b.854 (retention of menses); Ps.-Gal. *Def. Med.* 305 (19.430); Aret. 4.11.7–8; Orib. *Syn.* 9.51; Paul. 3.67 (cf. 4.26.3). Soranus’ treatment is missing (4.7), but cf. Mustio 2.23 and

Cael. Aur. *Gyn.* 2.108–10. Plutarch (*de curios.* 7 = *Mor.* 518d) mentions cancer of the womb as a disease that causes particular embarrassment to the sufferer.

### *Breasts*

Though there are scattered references, the ancient doctors seem relatively less interested in diseases of the breasts. The Hippocratic corpus has almost nothing (*Mul.* 186). Breasts can become inflamed, hard, and ulcerated, much like other parts of the body (Soranus 2.7–8, 2.28; Act. 16.35–49; cf. Pliny, *HN* 20.114, 21.132, 27.63, 30.125).

Aetius (16.42–8) considers breast cancer extensively, covering various types of cancers, and surgical and non-surgical treatment (citing Archigenes, Leonidas, Theodorus, and Philoxenos; cf. also Archigenes ap. Paul. 3.35). Leonides (in Aet. 16.44) gives a clinical description of surgery for breast cancer unequaled in horror until Fanny Burney. For Galen's physiology, cf. 11.139–41, 14.786, 15.330–1 (failure of menstruation, esp. to purge black bile), 17b.809, 14.579 (tumors), 11.344, 18a.80 (a case history). Soranus makes no mention of cancer of the breast, and, in general, it seems that the physicians' focus on the womb leaves the breasts as mere adjuncts, bound by sympathy to the womb (Galen, *UP* 14.4, 14.8; Soranus 1.15; cf. Hp. *Aph.* 5.38–9, 50, 52–3 with Galen 17b.827–9, 842–50; *Epid.* 6.5.11, *Nat. Puer.* 15). But this neglect in the literature contrasts with the numerous dedications of model breasts at shrines to Asclepius (Demand 1994: 91–2).

### *Therapy*

If women are cold, they need to be warmed. If women are wet, they need to be dried. If women are empty, they need to be filled. This treatment by opposites stands in contrast to the “like cures like” of sympathetic magic (Hanson 1998: 72). The treatment of women is hydraulics. Any excess heat or moisture needs to be purged/evacuated from their “fluid economy” (Flemming 2000: 17); any insufficiency needs to be made up. Their fluids need careful handling.

Therapy, for men and women, was divided into (1) regimen/dietetics, (2) pharmacology, and (3) surgery. Dietetics plays a surprisingly small role in gynecology, with the exception of restorative foods after a disease or operation (e.g., Hp. *Mul.* 143, cf. *Nat. Mul.* 4, 5). Hippocrates' *Diseases* 1.22 is typical of the way women are passed over. He says that men differ from women and older people differ from younger in speed of recovery; he then ignores women for the rest of the chapter. Women's wet nature requires a generally drier diet (Hp. *Salubr.* 6). Their excessive moisture needs to be controlled (Rufus of Ephesus, *Regimen for Women* in Orib. *inc.* 20; his *Regimen for Girls*, Orib. *inc.* 18, is concerned almost exclusively with ensuring fertility). And yet, “no amount of care over the food she consumed or the life she led could ever relieve a woman from the innate weakness of her body” (Dean-Jones 1994: 124; Fleming 2000: 220–7 for a nuanced overview).

Surgery, too, mercifully played a limited role, in part because of the limitations of pre-anesthesia and pre-antiseptic surgery, and the doctors' knowledge of those limits (Hp. *Aph.* 6.38; Celsus 5.28). Paulus (6.45) says of cancer generally and uterine cancer specifically, “Cancer grows worse when operated on.” Surgery is generally recommended only for abscesses in the womb that do not respond to medication (Paul. 3.65, 6.73). Soranus (1.15, 4.39) follows Themision (c. 90–40 BCE) in advocating hysterectomy for a prolapsed uterus that has turned black, but this is a desperate remedy for a desperate condition (his chapter on uterine cancer is missing). We read about Philoxenus of

Alexandria (fl. c. 75–50 BCE) (Cels. 7 *prooem.* 3; Galen 13.539, 645), who specialized in cancer treatment and wrote extensively on the subject. He recommended surgical removal of cervical cancer.

But one surgical procedure stands out as unique: clitoridectomy. Paulus of Aegina (Book 6) is our most detailed treatment of surgery from antiquity. Chapters are devoted to repairs of pathological conditions of the male genitals (53–8, 1–69: hypospadias, phimosis, hydrocele, hernia, etc.). Castration (69) is against the spirit of medicine. Paulus deprecates the operation to repair an imperfect foreskin or to remove the mark of circumcision (16.53; Cels. 7.25; cf. I Corinthians 7.18): no natural function is impeded and the risks in surgery are too great. The surgical extirpation of the clitoris, on the other hand, is justified if it becomes “overlarge.” Paulus is willing to accept hearsay testimony: “Some relate that certain women have an erection in that part similar to men and are roused to intercourse” (6.70), while Philoumenos (in Aet. 16.115) points to the example of the Egyptians (not generally taken as examples for proper conduct) and their “pre-emptive surgical strike” against adolescent girls (Flemming 2000: 218–19; see also [Galen] 14.705–6, Cael. Aur. 2.212, Mustio 2.76, based on Soranus 4.9 [missing]). Female genital mutilation has a distinguished history.

Much of the pharmacology was common to both men and women. The major difference was that the vagina offered one more entrance into the mysteries of the body (Flemming 2000: 219–20). Suppositories (Orib. 8.39; *Syn.* 1.20; Paul. 1.45; Aet. 3.160) are no less popular with the doctors than medicated tampons (e.g., Antyllus in Orib. 10.25; Paul. 7.24, who had three types: softening, tightening, dilating; Hp. *Mul.* 133; Paul. 3.61.4; Archigenes in Aet. 16.86; Cels. 5.21) and both may contain dangerous or repulsive ingredients (von Staden 1992; Hanson 1998: 87–93; Totelin 2007, 2009: 212–14). Yet, there is a tendency to treat what can be treated, and therapy focuses on the reachable womb. The womb is the source of all diseases and so must be treated. The womb can be treated and therefore is the source of all diseases.

Large amounts of ancient therapeutics strike us as grotesque or horrifying, and more so in what was done to women than to men. There is an understandable tendency to focus on the spectacular and horrific: bizarre devices for piping smoke into a vagina; fumigation of eviscerated puppy, stuffed with spices and roasted on the coals (*Mul.* 230); “succussion,” where a woman suffering from uterine prolapse is tied upside down to a bed or ladder that is then pounded repeatedly onto the ground (Hp. *Epid.* 5.103 = 7.49 (the patient dies), *Nat. Mul.* 5, *Mul.* 68, 144, *Ster.* 248; see Dean-Jones 1994: 71 n. 98).

The doctors, too, seem to devote extra space to the grisly and the bizarre (Lloyd 1983: 82; cf. King 1995b: 139); for example, excision of a dead fetus (Hp. *Foet. Exsect.*; cf. *Mul.* 70, *Superf.* 7; Cels. 7.29; Soranus 4.9–13; Philoumenos in Aet. 16.23; Paul. 6.74) and uterine prolapse (though this condition may have been more common in antiquity).

Such considerations also raise the question of how often any particular remedy was actually employed. A recipe book is not a guide to what we eat every day. What ancient medicine was like from the patient’s point of view is something for which the medical books provide little information (King 1995a, 1995b). If you were a woman complaining of a headache, would the doctor treating you turn first to texts about headache (the unmarked, male, case) or to books about diseases of women, looking for headache as a symptom there? Were you first a sick person or a sick woman?

Manuli went so far as to accuse ancient authors of participating in a “logic of medical terrorism” (“ragione del terrorismo igienico,” Manuli 1983: 161). Other scholars have hoped to find a lost “women’s tradition” in the same recipes, focusing almost entirely on

drugs said to cause abortion and contraception (see King 1995a, 1995b: 137–8, 1998: 132–56 for detailed criticism). Lloyd (1983: 78) and Flemming (2000: 116) are nearer the mark in pointing out that the doctor in *Diseases of Women* 62 is genuinely concerned for women’s wellbeing: he has seen women die because they are being treated no differently than men. Ancient gynecology was strongly focused on the production of healthy babies. In the Hippocratic corpus, health for women means healthy reproduction, with the unfruitful most subject to bodily disorders. Yet it would be wrong to claim that women are seen in the medical works as merely baby factories. There is considerable concern for women in pain, even though diseases in women seem often to be equated with women’s diseases. Abortion and contraception (not clearly demarcated until Soranus 1.60; cf. Act. 16.16) were part of the medical works from the start, however ineffective (e.g., *Mul.* 76; Flemming 2000: 162–3, 167–70). There is no suggestion that doctors considered women less worthy of being cured, or that they received deliberately inferior care (Lloyd 1983: 68).

Yet, of course, every etiology, every diagnosis, every treatment is deeply imbricated in socially approved models. No therapy is recommended more often for women than intercourse and pregnancy. We turn with some relief to the measured and humane approach of Soranus (Temkin 1956; Lloyd 1983: 168–200; Hanson and Green 1994). Soranus rejects the womb-as-animal theory, considering it instead just “very similar” to an animal with its own sense of touch (1.8); he no longer believes in the old etiology of hysteria, but he still keeps faith with the disease and its cure, easily fitting them into his new framework of methodist medicine (3.4; Hanson 1998: 84–6).

## 4 Women as Healers

Women’s roles as tenders of the sick, like most of their activities, are immemorial and invisible, apart from a few glancing references (Xen. *Oec.* 7.37). Though earlier scholars had pointed to their presence as professionals too, this practice was largely invisible until a seminal article by Pomeroy (1978). It has taken a considerable amount of time, but we can say that “It is now a well-established fact that women practiced medicine in the ancient world” (Flemming 2007: 257). There is a lot of work still to be done to reconstruct the intersection of the history of medicine and the history of women.

We have direct evidence of women physicians generally (e.g., Pl. *Republic* 454d2, 455e6–7; Mart. 11.71.7; Apul. *Met.* 5.10) and attestations for more than sixty women who were recognized by their societies as medical practitioners, called by the normal word for physician with a feminine ending (Greek *iātrinē*; Latin *medica*) or cited as authors of medical works or recipes (see Parker 1997; Flemming 2000: 33, 35–7, 359–60, 383–91 for discussion and lists), beginning with Phanostrate (c. 350 BCE from Acharnai in Attica), who is called on her gravestone *maia kai iatros* (“midwife and doctor”), making a clear distinction between the two roles.

We have few details of these women’s training or education (true of most male doctors), though we get a glimpse in a few cases. The profession of medicine often descended in families. Antiochis of Tlos (c. 95–55 BCE) was daughter of the physician Diodotus and was honored by a civic statue “for her experience in the doctor’s art [*iatrikē tekhnē*].” She was a dedicatee of Heracleides of Tarentum, and in turn cited by Asclepiades Pharmakion (first century CE) as an authority for various diseases. Apollonia’s mummy (Egypt, second and third centuries CE) boasted of this type of family training, calling her *iatros iatron* (doctor

and the daughter of a doctor). A similar statue was erected to Aurelia Alexandria Zosime (Adada in Pisidia, date uncertain) by her doctor husband to honor “her medical knowledge.” Pantheia (Pergamon, second century CE) was also the wife of a physician (whose father was a physician), as were Naevia Clara (Rome, first century BCE/first century CE), called *medica philologa* (“doctor and scholar”), and Auguste (Gdanmaa in Lycaonia, fourth–sixth centuries CE), who with her husband is called “chief civic doctor” (*arkhi-iatrēna*). Restituta (Rome, first century CE) was educated by her former owner, Claudius Alcimus, “doctor to Caesar.” As a mark of her learning, the funerary relief of Mousa (Istanbul, second/first century BCE) shows her with a scroll in her hand.

It is likely, though we cannot know for certain, that the practice of many women doctors was primarily concerned with women’s diseases and childbirth. However, the examples of medieval and Renaissance Europe should warn us against too easy an assumption of a limited practice. There are many indications of a wider sphere. The civic honors accorded to Antiochis, Aurelia Alexandria Zosime, and Auguste all point to a city-wide practice. The epitaph for Domnina (Neoclaudiopolis, second/third century CE) from her husband also points to a extensive practice: “you delivered your fatherland from disease.” Likewise, the tribute to Pantheia from her doctor husband, Glycon, also seems to indicate a practice comparable to his (although with classic reservations): “You raised high our common fame in the art of medicine, and even though a woman, you did not fall short of my skill.” Gemina (Avitta Bibba, North Africa, c. third century CE) is called the “savior of all through her knowledge of medicine”; Iulia Saturnina is praised as “the best doctor”; and Scantia Redempta is “outstanding in the discipline of medicine.”

A number of women are cited as medical authorities (Flemming 2007; Parker forthcoming, for details) by Andromachus the Younger and Asclepiades (both in Galen) and by Pliny the Elder. Aetius takes excerpts from the books of Aspasia (sometime before c. 550 CE; not to be confused with her famous namesake) more often even than Soranus (16.12, 15, 18, 22, 25, 50, 72, 109, 112, 114). Aspasia covers a wide variety of gynecological disorders and treatments including surgery and abortion, and gives greater thought to the care of the patient than Soranus. The cited chapters refer to other places in which she dealt with non-gynecological subjects (109, 112). We also have a full gynecological work preserved in *On Women’s Diseases* by Metrodora (probably c. second– fourth centuries CE), whose well-organized treatise covers the whole of gynecology (but not obstetrics). Metrodora takes sides in several medical controversies over symptomatology and etiology (e.g., inflammation of the womb). She makes several unique contributions to theory and etiology. In clinical practice Metrodora employs both digital examination and the vaginal speculum, providing a unique and detailed description of pathology based on its use.

From at least as early as the fifth century BCE in Greece, women doctors have been part of the history of the western world. They called themselves doctors and were recognized as such by their communities. We know little about their training, but then we know very little about the training of their male colleagues. Their practice included gynecology and obstetrics but was not limited to these. Several achieved considerable social standing and high civic honors. Others wrote medical works that were used and cited by their male contemporaries. However, all of these women worked *inside* the great tradition. Metrodora is thoroughly Hippocratic in her understanding and treatment of hysteria (1–2). Aspasia differs little from Rufus or Soranus about the retention of the menses (Aet. 16.50).

What may strike us most forcefully in ancient medicine, especially ancient gynecology, is the triumph of theory over experience, not merely “false consciousness” in the Marxist sense but the alteration of bodily experience. The doctors claimed to have listened to the voice of women (Lloyd 1983: 76–9; Hanson 1990: 309–10; Dean-Jones 1994: 27–31; King 1995b), but what they reported the women to have said often cannot be true: experienced women can *feel* when their wombs close over the seed; feeling dry after intercourse or not seeing the seed fall is proof of conception; Hippocratic doctors can feel the membrane across the vagina blocking the mouth of the womb (*Mul.* 20, 223, *Nat. Mul.* 67; disputed by Soranus 1.17, repeated in *Act.* 16.108); men can feel the womb sucking their seed.

### RECOMMENDED FURTHER READING

The best introductions are Carson (1990) and Hanson (1990). Lloyd (1983) is indispensable. Dean-Jones (1994) gives full treatment of the Hippocratics; Flemming (2000) traces the story as far as Galen.

Join the AMA Women Physicians Section in honoring physicians who have offered their time, expertise and support to advance women in medicine. The AMA is urging Vice President Pence and FEMA to take immediate actions to help office-based physicians obtain the personal protective equipment they need. 5 ways to support LGBTQ patients during COVID-19 and after. Learn with the AMA and LGBTQ physician leaders about where patients need the most help and how to connect with expert resources. Historically and presently, in many parts of the world, women's participation in the profession of medicine (as physicians or surgeons for instance) has been significantly discouraged. On the other hand, women's informal practice of medicine in roles such as caregivers, or as allied health professionals, has been widespread. Most countries of the world now provide women with equal access to medical education. However, not all countries ensure equal employment opportunities, and gender equality has yet Women's bodies have a long history of treatment as a source of sickness or corruption by medicine with disdain and dismissal. In times past, women could be institutionalized for what we now know to be PMS or other common reproductive issues. Yet, even today, with huge strides in feminism and medical knowledge, women's pain is still often treated as "just hormonal" or psychosomatic, often understudied and undertreated.