Aristotle on the Matter of Form

A Feminist Metaphysics of Generation

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4

The Feminine and the Elemental in Greek Myth, Medicine and Early Philosophy

The question of the relation of form to matter and of male to female in Aristotle must be understood in light of the historical and mythological context in which Aristotle exists and thinks. Even though Aristotle does not cite the Hippocratics directly, the work of the Hippocratics captures the views of health and medicine and bodies and gender that are contemporaneous with Aristotle. Regardless of whether there is any authorial unity to the corpus, these texts help situate Aristotle’s thinking and show what he is responding to within the accepted opinions of his time. Like Aristotle, the Hippocratics did not think in a vacuum. Helen King argues that the Hippocratic corpus must be understood within the broader Greek culture, extending back to Greek myth. Paola Manuli maintains that the Hippocratics’ accounts of women’s bodies were not necessarily about how they observed women’s bodies working, but their anxieties about how women’s bodies work. We might say that the Greeks’ accounts of the female gods similarly reflect something about the anxieties and expectations about women and women’s bodies held by those who wrote and perpetuated those stories, which is to say, Greek men.

This chapter considers women in Greek mythology and medicine not to deduce claims about what it was like for women in Greece on the basis of what

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1 For more on the history and composition and authorship of the Hippocratic corpus see Elizabeth M. Craik, *The ‘Hippocratic’ Corpus: Content and Context.*
2 Helen King, *Hippocrates’ Woman: Reading the Female Body in Ancient Greece,* p. 23.
3 Paola Manuli, ‘Fisiologia e Patologia del Femminile Negli Scritti Ippocratici Dell’Antica Ginecologia Greca’, and ‘Donne Mascoline, Femmine Sterili, Vergini Perpetue. La Ginecologia Greca Tra Ippocrate e Sorano’, quoted by King, *Hippocrates’ Woman,* p. 22. Andrew Stewart argues in ‘Rape?’ that ‘Mythological pursuits and abductions represent nothing more or less than the projection of Athenian male desire first upon the heroic world and then upon the divine one.’ Mary R. Lefkowitz is sceptical of this view, arguing that the Greek gods were not considered role models for mortals in *Women in Greek Myth,* p. 72.
the Greek goddesses were capable of or on the basis of how Greek doctors understood their bodily capacities. Rather, women in mythology and the treatment of women in medicine reflect the cultural assumptions and concerns of men about women. This chapter is not meant to be an exhaustive account of goddesses and women in myth and medicine, but to present a framework and a background for claims in fifth and fourth century BCE ancient medicine and natural science about gender differences by an examination of views of women’s bodies and those elemental forces associated with them by drawing on select depictions of goddesses. In this first section of this chapter, I consider the role of female divinities in reproduction, with a consideration of those gods born out of Zeus and gods who reproduce without mating. I consider the ambiguity of the ἀρχή-ic role of Gaia as the source of living things, and the depiction of Pandora as the beginning of a separate race – women. Since it captures arguments criticised by Aristotle, I address the treatment of the role of woman in reproduction in the last play of Aeschylus’s Oresteia cycle, Eumenides. Along the way, I show how the Greeks capture the fluidity and blood contribution of women. The second section of this chapter shows how Pre-Socratics thematise the elemental, which is then explicitly associated with gender in the Hippocrates as I show in the third section. The following chapters will reference this chapter to show the places where Aristotle is working out of general assumptions about generation and gynecological medicine and places where Aristotle is arguing against the generally accepted view.

Gender, Generation and the Gods

Greek theogony recognises that Greek goddesses are needed in reproduction. Whatever the playboy gods do and however independent they try to be, ‘No Greek theorist ever argued that the male could provide this element [material] in reproduction.’ While Athena and Dionysus both appear to be born from Zeus, their birth requires their mothers’ contribution before Zeus can intervene to take all the glory for himself. Athena is conceived when Zeus falls for Metis, daughter of Oceanus and Tethys, the personification of the clever. Metis keeps changing shape to escape Zeus, who finally penetrates her by changing shape to match her shape. When Metis is pregnant, her grandmother, Gaia, prophesies that Metis’s first child will be a girl and the second will be a boy who will overthrow Zeus. Zeus’s response is to find Metis and swallow her (after he tricks her into changing into a fly), just as his father had thought he could stave

4 Lesley Dean-Jones, Women’s Bodies in Classical Greek Science, pp. 151–2.
off the coming rebellion by swallowing his children. Note that Zeus does not
swallow the offspring, but the mother carrying the offspring. Metis lives on in
Zeus as his cleverness. The Greek men who write the myths imagine a pleasure
in intercourse with a goddess (a pleasure both in sexual intercourse and being
pregnant with), but recognise that such pleasure has a cost. Eventually, Zeus
has a terrible headache and screams throughout the earth. The gods rush to
help; Hermes realises the problem and has Hephaestus split open Zeus’s head.
Out of Zeus’s head springs Athena, fully grown and armoured.

Zeus tries to manage the reproduction of Metis by swallowing her, but
that power cannot be stopped, even though Metis dies. The emerging child
requires an opening in the head of Zeus. By contrast to birth from a woman,
Zeus cannot birth Athena on his own but requires the technological interven-
tion of Hephaestus. The story of Athena’s birth points to the fear of men that
their offspring will overtake them, but also the recognition that this cannot be
stopped. Zeus does not try to produce Athena on his own; he tries to prevent
any offspring from coming forth in order to save his dominion, but the material
forces of Metis cannot be stopped even by the king of the gods.

Dionysus is the other god who is born from Zeus. Like Athena, Dionysus
is conceived in a woman. Semele, daughter of Cadmus, the king of Thebes,
strikes Zeus’s fancy, so he impregnates her, angering Hera. Hera makes Semele
doubt whether Zeus is really divine so he promises to do whatever she asks.
Semele asks him to reveal his divinity. Like an adolescent on a dare, Zeus can-
not hold back. When he releases the thunderbolts and lightning and the earth
shakes and fire is everywhere, it burns Semele. Zeus rescues Dionysus from
Semele’s burning body and puts the growing foetus in his thigh. When the
baby is born, Hermes brings the baby to Semele’s sister Ino and her husband
Athamantas. In this story, as in Athena’s birth story, the child is conceived
in the mother and only later moved into Zeus. The power of fire, which is by
turns creative and destructive, destroys the mother.

Anxiety over the productive power of women is also found in Hesiod’s
original goddess of life, Gaia. While feminists might want to take Gaia as
an emblem of power, she is not unlike Pandora as a locus of anxiety. The
maternal earth that is its own source of life is a scary earth, likely to be just
as reckless as those who might overreach her bounds. Without parentage
and able to conceive by herself – Ouranos, the mountains and the sea are
her children by asexual reproduction – Gaia is the double-threat of woman,
unlimited by parent or mate. If her power is in her capacity to give life and

5 Apollodorus 3.4.3 and Homeric Ode to Dionysus II.1–21.
6 Hesiod, Theogony 116–32.
this power is owed to no one, it is also why she is unrestrained from having her children castrate her partner, Ouranos, who lies on top of her with no chance to bring her Titan offspring into the world. Ouranos, acting as a form that conceals without any place for the material possibilities to emerge, is confronted by Gaia, material force unleashed. Her source of life as her own makes her responsible to no one, except perhaps her children, and more to her daughter Rhea in her efforts to recover her own offspring than to her son Kronos, who keeps swallowing Gaia’s grandchildren whole.

Hera jealously speaks of her capacity to give birth on her own in the *Homeric Hymn to Apollo*, and proceeds to bear Hephaestos and Typhon. Hesiod tells us that Hera gives birth on her own to Hephaestos because she is angry at Zeus. In one version of the text, it is her strife that causes her to give birth. (This makes the story a bit strange because Hephaestos is the god who splits open Zeus’s head to birth Athena, and yet it is this birth that angers Hera to go and conceive Hephaestos on her own. The gods are not bound by time.) Typhon was the giant who had a hundred serpent heads on each hand and was eventually imprisoned by Zeus in the deep darkness of Tartaros. Without men, the story suggests, women might give birth to monsters.

The self-conceiving woman was a serious threat, the bearer of head-splitters and monsters, the mother of castrators, plotters all. Like Gaia and Hera, Pandora is another mythical figure who captures the anxiety of the feminine among men. We learn first of Pandora from Hesiod, who describes her in *Theogony* as the forebear of ‘wicked womenfolk’ who are a ‘nagging burden’ to men, refusing to share in ‘abject want, but only of wealth’. Hesiod accuses Zeus of having made ‘women to be an evil for mortal men, helpmates in deeds of harshness’, beginning with Pandora. Pandora brings the punishment of work without contentment. No matter what a man might do, the presence of woman is a burden. Women are the drones who do no work but eat their fill of what the worker bees produce. A separate race, women are unnatural, with an unnatural and wicked source. Women make life harsh. But as Hesiod points out, there is no escape from the evils of women, because if a man escapes ‘the malice of women’, he will be alone in old age. The luckiest a man could be would be to marry ‘a wife of sound and

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7 Lefkowitz calls the power to command loyalty a power peculiar to goddess mothers in *Women in Greek Myth*, p. 16.
9 For more on woman as another race extending to Pandora, see Froma Zeitlin, *Playing the Other: Gender and Society in Classical Greek Literature* and Nicole Loraux, *The Children of Athena: Athenian Ideas about Citizenship and the Division between the Sexes*. 
prudent mind’, but even she would need her husband ‘to balance the bad and good in her’.10

Nicole Loraux points to how Pandora in Hesiod’s depiction is all appearance – more the things she wears rather than her body or substance.11 King takes the appearance as deception further to argue that Pandora mirrors the deceptive oxen stomach that Prometheus presents to Zeus.12 Like the stomach, which looked attractive but was just covering over bones, Pandora presents herself as παρθένος, maiden or virgin, when she is really γυνή, having already given birth, and now birthing uncontrollably the miseries of the world and women. King argues that following the model of the Hippocratics, who see the birth of the first baby as the end of the process of becoming woman, Pandora’s deception as depicted by Hesiod in Works and Days is that she is γυνή all along and merely disguised as παρθένος. Pandora has birthed the grief, the woman, the ongoing mouths to feed, the endless production without limit that is the destruction of man. But she pretends to be the lovely maiden.

King finds this concern with deception regarding reproduction to pervade Greek men’s view of women. If men think they plant the seed and woman is the field where the seed grows, men think as the sowers that they have the right to decide whether the seed should take root, but also that they lack control over the site in which the seed takes root.13 King explains that male writers who suspect that women have ways of preventing conception are not indicating that women did in fact control and manage contraception, but ‘this may be more appropriately seen as part of a wider fear in ancient culture that women have knowledge of drugs, herbs, and spells which are potentially damaging to men . . . The myth of effective plant-based contraceptives may thus be a male expression of fear that women hold the knowledge which could enable them to control the fertility of the household.’14 This effort to prevent women from controlling fertility might account for Hesiod’s depictions of how Gaia, despite all her efforts, still does not control her fertility after castrating Ouranos: the bloody drops that fall upon her as a result of the castration impregnate her with the Furies, the Giants and the Melian nymphs.15

10 Hesiod, Theogony 590–612.
12 King, Hippocrates’ Woman, pp. 23–6. Lefkowitz argues that sexuality in general – which one could argue is ushered in by Pandora – was deemed dangerous because it deceives by affecting the mind and in particular, judgement. Women in Greek Myth, p. 23.
13 This analogy is Page DuBois’s focus in Sowing the Body.
14 King, Hippocrates’ Woman, p. 156.
15 Lefkowitz, Women in Greek Myth, p. 17.
Men’s lives are threatened by female reproduction because, just as Pandora is a beautiful image that conceals the destruction and suffering she ushers in, women’s bodies conceal what cannot be controlled. Not only are women’s reproductive organs internal and hidden, in the Greek organisation of public and private spaces women’s bodies are hidden away from men. This concealment makes women potentially deceptive. Women threaten men with their reproduction, because, as Hesiod writes in *Theogony*, they both are the bellies and they produce the bellies they stuff from the fruits of the labour of others.\(^{16}\) The word for belly, \(\gamma\alpha\sigma\tau\eta\rho\), can also mean womb, and as King notes, to have or hold in the \(\gamma\alpha\sigma\tau\eta\rho\) means to be pregnant. Woman in Hesiod’s poem is held responsible disparagingly for always being pregnant. Silvia Campese notes that woman both has a \(\gamma\alpha\sigma\tau\eta\rho\) through which reproduction is made possible and she is a \(\gamma\alpha\sigma\tau\eta\rho\), a vessel, which must be controlled by a man because woman is so ravenous.\(^{17}\) Pandora herself appears to be the exemplar of woman as the jar or womb, which is both voracious and productive, taking up the fruits of the earth and producing the demanding mouths.\(^{18}\) As Hesiod writes in *Works and Days*,

But the woman with her hands removed the great lid of the jar and scattered its contents, bringing grief and cares to men.\(^{19}\)

The great lid of the jar of the womb has been removed for the necessity and the demise of men (not just man). And yet, women’s refusal to open the jar or her control over it could be just as worrisome to men.

Hesiod does not generally seem to think that the feminine is only a jar, given the fecund power of Gaia in the *Theogony*. One might argue that mortal women, unlike goddesses, were merely jars. Aeschylus might be the one exception to the notion that no Greek theorist thought that the male could supply material in generation, when he maintains that the mother is merely the place of reproduction in *Eumenides*, the third play in the Oresteia cycle. Orestes has killed his mother, Clytemnestra, out of revenge for killing his father, Agamemnon, whom Clytemnestra killed out of revenge for sacrificing Iphigenia in order to move the winds to sail the ships to Troy to fight the

\(^{16}\) Hesiod, *Theogony* 599.

\(^{17}\) Silvia Campese, ‘Donna, casa, città nell’antropologia di Aristotele’, p. 16.


\(^{19}\) Hesiod, *Works and Days* 91–6.
Trojan War as told by Euripides in *Iphigenia in Aulis*. The cycle of revenge must be broken before the city is awash in blood. It stops by not shedding a man’s blood. Throughout the cycle, it is evident that the shedding of women’s blood underwrites and enables the definitive projects of the community. In the sacrifice of Iphigenia, Agamemnon contributes a sacrifice to the city, a sacrifice born of the menstrual blood of the mother.

King points to the linkage between menstrual blood and sacrificial blood where both are public blood – blood that is required for the success of the community. To say the woman is fulfilled in the child is to say that she has put her blood to work for its purpose which furthers the community. This connection between menstrual blood and sacrificial blood is also found in the connection between marriage and death in Greek myths. Iphigenia is brought to Aulis to be sacrificed by Agamemnon under the pretense that she is to be married to Achilles. Plutarch tells a story in which a group of παρθένοι strangle themselves, an event which is explained with reference to Hippocrates, who maintained that the lack of flow led to strangulation. If defloration is postponed too long, the παρθένος would be strangled to death by the lack of flow of blood. A woman is saved by intercourse, which opens up the flow, while woman is the source of the flow of blood that saves the city in the case of Iphigenia. Iphigenia’s sacrifice makes the service of the public effort to go to war supplant the family contribution to the city in the form of reproduction. King observes that girls in Greek myths use the girdle that is supposed to protect their virginity to strangle or hang themselves after being raped. While her husband would be expected to release the girdle in defloration, the woman takes the power to manage her girdle and thus her body herself by using the girdle as a noose. Just as sacrificial death substitutes for marriage for Iphigenia, Antigone also transforms the girdle of the παρθένος into a noose in the place of marriage. Artemis, the goddess of the παρθένοι, was herself called the strangled goddess.

Agamemnon is responsible to the city to do whatever is necessary to move the winds. Iphigenia is responsible to the city and to Agamemnon to give her blood for the city to go to war. Clytemnestra is responsible to her husband, to support him. But his failure to maintain his responsibility to Iphigenia as his blood, blood that is less binding according to the logic of Apollo in Aeschylus’s play because she is his daughter and not his son, leads Clytemnestra to bleed him in his bath. Orestes then takes the responsibility that he has to the blood

of his father as a demand for the blood of his mother, even though his very being owes its existence to the blood of his mother, as the Chorus says (hasn’t he already taken it once before?).

The question of whether Orestes in *Eumenides* is responsible for a crime in killing his mother hinges upon whether he owes her anything. The Chorus, Furies awakened by the ghost of unavenged Clytemnestra, says Orestes must pay because he killed the one who gave him birth. When Apollo asks the Chorus whether Clytemnestra, too, had a responsibility to Agamemnon, the Chorus responds that it is not the same kind of responsibility that Orestes had to Clytemnestra, as blood of her blood. Apollo denies this claim, while the Chorus calls for further blood to avenge the mother’s blood soaked into the ground. Orestes says the sacrifice of swine is recompense enough. Here the sacrifice of the animal replaces the blood of the mother. The Furies insist that bloodshed must be met with further bloodshed, and that their purpose is to assign proper lots for human action, and describe their task as to ‘drive from home those who have shed the blood of men’. The Furies agree to give this task to Athena, which seems to be the moment that hearkens the end of the revenge cycle set up by the Furies. The end of this revenge cycle falls finally on the sacrifice of Clytemnestra, who is never avenged, and becomes, as the shed blood for which no blood will be shed, a sacrifice that enables the peace of the community and the end of the bloodshed. Just as Iphigenia’s shed blood sets the Greeks in action to their glory in Troy, so the shed blood of Clytemnestra leads to the possibility of Greek action at home, freed finally from the responsibility for avenging blood. The capacity to decide falls to Athena who considers herself without mother (though as I said above, we know she had one), which makes her more willing to allow the matricide to go unpunished. In this move, she is depicted as wise and just. The Chorus asks if Orestes does ‘forswear your mother’s intimate blood?’

If the play is taken as a moment of an overcoming of destiny (in the Furies) for the sake of justice (in Athena), then it also depicts the subordination of the motherblood to the patriarchal line. Nancy Tuana marks a shift from the ‘female principle of creation [as] a metaphor woven throughout Greek cosmogony’ captured in the figure of Gaia to metaphors of sowing and planting as the product

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22 *Eumenides* 151–2.
23 *Eumenides* 211–13, 261, 284, 321–96.
24 *Eumenides* 421.
25 *Eumenides* 434–5.
26 *Eumenides* 608.
of men’s labour on the property of women’s bodies.27 This language is found in sexual reproduction in Hesiod28 and later in Aeschylus, who describes Oedipus as one ‘who sowed/his outrageous agony/in the inviolate field/of his mother’,29 and Sophocles who in Antigone has Creon defend killing his son’s betrothed because ‘there are other fields for him to plough’.30 C. D. C. Reeve maintains in his notes on Aristotle’s Politics that Athenian fathers would give their daughter in marriage with the words, ‘I give you this woman for the plowing of legitimate children.’31 Tuana marks this as a shift from a fertile earth that produced enough without labour to an agrarian culture that required working the land. Where life springs forth without work, it is feminine. Where it requires work, it is masculine.32

While there is considerable dispute in the literature over whether there is in fact a pre-historical matriarchy, it is sufficient to show that there are such references. A pre-historic or pre-Olympian feminine deity would not necessarily point to a matriarchal world. Such a deity could just as much capture anxieties about nature and its unpredictable whims of fertility. Nonetheless the projection back to such a deity and the sense that the current order of masculine gods had set things right still indicates concern with the uncontrollable, unmanageable role of women in reproduction, in the possibility of male immortality held in women’s hands. The recognition of such a primordial goddess could make the patriarchy feel more fragile and less natural, and thus even more anxious about enforcing its supremacy.

Further evidence of the insistence of privileging the masculine is the criticism of how Agamemnon dies. Apollo argues that dying (and thus killing) in war is more honourable than dying (and thus killing) in one’s private home, where one should feel protected.33 Women are sneaky, conniving. Even an Amazon would fight like a man. But this death was not manly. As Hesiod tells us, a man expects to find comfort in a woman, and here is betrayed. The Furies call attention to how Zeus himself challenged his father, and so there is little support in Greek myth for the view that the father must have pride of place.

29 Aeschylus, Seven against Thebes 956–9.
30 Sophocles I 569. See DuBois, Sowing the Body.
32 Related to this point is the convergence of autochthony and masculinity as described by Loraux, The Children of Athena.
33 Eumenides 625–8, 632–5.
In the famous passage referenced by Aristotle, Apollo responds by challenging the notion that a mother is a parent at all:

The mother is no parent of that which is called her child, but only nurse of the new-planted seed that grows. The parent is he who mounts. A stranger she preserves a stranger’s seed, if no god interfere. I will show you proof of what I have explained. There can be a father without a mother. There she stands, the living witness, daughter of Olympian Zeus, she who never fostered in the dark of the womb yet such a child as no goddess could bring to birth.34

Aeschylus has Apollo invoke Athena as evidence that men can conceive without women but not vice versa. And yet, as we have seen, Greek myth did not depict men reproducing without women, only the other way around. If anything, Zeus is the one who is merely the carrier for both Athena and Dionysus. Aeschylus was surely not unaware of this. Yet Athena decides on the basis of this argument from Apollo on behalf of Orestes. Athena’s response is that ‘There is no mother anywhere who gave me birth.’35 That her mother did not give her birth is not quite the same thing as saying her mother contributed nothing to her, since Athena is conceived in Metis, and merely carried by Zeus. Athena is a false example of Apollo’s claim – her mother was not the place of her.

While the cycle of blood-letting among the mortals ends by absolving Orestes, the danger that the Furies would still bring vengeance by preventing the fruitfulness associated with the mother remains. The Furies have given their role of deciding destiny in this case to Athena, who appeals to them with reference to Gaia not to bring a curse on fertility in response to the decision:

Earth be kind
to them, with double fold of fruit
in time appointed for its yielding. Secret child
of earth, her hidden wealth, bestow blessing and surprise of gods.36

35 Eumenides 736.
36 Eumenides 944–8.
Athena stops the cycle of revenge in three ways: first by taking the decision away from the Furies (the cosmic consequences of matricide are suspended), second by deciding for Orestes (against his mother) and third by appealing to the Furies to continue to foster fertility (the work of the mother). Gaia and her hidden wealth that is the power of fertility is here invoked. The capacity of the feminine earth to withhold fertile crops is repeated in the Olympian Demeter. Her power and the anxiety that she might withhold it are captured in her response to the sexual (mis)conduct of Hades, who has taken the fruits of Demeter’s own labour, Persephone, to the underworld. The anger and arbitrary whim of women is associated with the whim of the earth to bring forth anew, a whim that must be managed and constrained.37

Ouranos tries to prevent the fertile power of Gaia starting a cycle continued by Zeus, who swallows Metis in an effort to destroy the offspring in order to preserve his rule. Zeus’s child with Metis, Athena, appeals to the Furies, who demand revenge for maternal blood spilled (even as Athena leaves unavenged the blood of her own mother). Athena establishes an end to the bloodshed by taking over the duty of the Furies, replacing revenge with justice decided by some wise judge. The Furies express their anger and their intention to make the land barren, and even though justice has replaced fate, it is still the threat of the thunderbolt from Zeus – Athena’s father and only remaining parent – that brings the Furies in line. With the threat of Zeus in the background, Athena appeals to the Furies to put persuasion in its rightful place and to take their rightful place in the household and out of public life. In this place, the Furies will no longer cut men down before their prime,38 but instead have the power to help παρθένοι set up house with men. Aeschylus thus depicts the restraint of the powerful female Furies within the limits of the home, an accomplishment borne out of the sacrifice of Clytemnestra at the hand of Orestes.39

Aeschylus might be capturing an emerging conflict between the view depicted by the later gods to suggest that the woman contributes only place and the earlier gods like Gaia who are considered the source of life. Athena’s appeal to the earth would seem to mark a recognition that earth is the source of life and not just the place for it. Further support for the play as a conflict between these views is that it opens with the Pythia, the spokesperson for

37 Homeric Hymn to Demeter. See Zeitlin, Playing the Other, pp. 164–7. For more on Greek tragedy exhibiting male anxiety about female sexuality, see Nancy Sorkin Rabinowitz, Anxiety Veiled: Euripides and the Traffic in Women.


39 See Luce Irigaray, ‘Body against Body: In Relation to the Mother’.
Apollo at Delphi at a place that is also associated with the earlier mother goddess Sybil. The Pythia’s opening line is, ‘I give first place of honor in my prayer to her who of the gods first prophesied, the Earth; the next to Themis, who succeeded to her mother’s place of prophecy.’\textsuperscript{40} That pride of place is something to be feared and managed, replaced with male principles of justice and limitation and proper order. Aeschylus does not ignore that the cost of the institution of these principles is borne by women from Iphigenia to Clytemnestra. Women’s power is co-opted by becoming \textit{for} the masculine principles.\textsuperscript{41}

There is no disputing that women contribute to reproduction, but that contribution does not elevate women’s power in society; it increases men’s sense of their need to control women. Women in their reproductive roles are considered deceptive and capable of withdrawing their cooperation beyond the control of men. Moreover, the \textit{Oresteia} cycle as well as stories of gods born out of Zeus show how women contribute fluid and material in the form of blood to public life and private life in the blood of Iphigenia and Clytemnestra and to reproduction – Zeus can be the place but not the material that produces Athena and Dionysus. In these stories, women are not only material, but particular ways of being material. Women from Sybil/Gaia to Demeter, Artemis and Pandora are associated with earth and moisture or fluid in contrast to the fiery power of men, exemplified in the thunderbolt and lightening of Zeus and the forming power of Hephaestus. The elemental role in generation captured by gods and goddesses, heroes and heroines becomes conceptualised by the Pre-Socratics. As Adorno writes, ‘ancient concepts are essentially secularized gods’.\textsuperscript{42}

\textbf{The Elemental among the Pre-Socratics}

The purpose of this chapter is to contextualise Aristotle’s work in the milieu of ancient Greek thinking. The discussion of the feminine in mythology shows a tension between a recognition of the power of women to procreate and an anxiety about how that power could change and challenge the place of men within their world. It also points to the ways that earth, blood and material

\textsuperscript{40} \textit{Eumenides} 1–3.
\textsuperscript{41} Lefkowitz argues that women are depicted in Greek tragedy in a way that recognises their importance in Greek society, and that women’s passivity sequestered from the action depicts the human condition of powerlessness in relation to the gods, an argument that would still seem to align masculinity with powerfulness and the divine, in \textit{Women in Greek Myth}, p. 51.
are attributed to the feminine as a source of life and reproduction. In this section, I move backward historically from some of the commitments of the Hippocratics regarding the elements and material forces like balance and flow to trace those ideas to the work of Pre-Socratic thinkers. By looking at the Pre-Socratics we can see how Aristotle’s work is situated within several centuries of disputes about how to understand not just change in general but the specific change of generation.

The Hippocratic authors reject the Milesians’ view that nature in general and human beings in particular are composed at bottom of a single element, of air or fire or water or earth. They also reject the view that human beings are a particular humour, like blood, which changes when influenced by the hot and the cold. Both the argument regarding humours and the argument that human beings are reducible to one element depend, one Hippocratic author argues, on the view that the human is a unity, that it is made of one thing, which could not be the case because a unity could not suffer pain and there could not be a cure because the cure would have to be one, but there are in fact many cures. Rather, ‘For in the body are many constituents, which, by heating, by cooling, by drying or by wetting one another contrary to nature, engender diseases; so that both the forms of diseases are many and the healing of them is manifold.’ This view draws on the Anaxagorean and Empedoclean view that there are many constituents that are condensed and rarefied to form different entities. The author of Nature of Man continues that if the human being is blood then there would be a season of hot or cold when a person could be blood alone, as influenced by the temperature, but since this never occurs, human beings are not just one humour.

The Hippocratic author of Nature of Man argues for the multiple constituents that comprise natural beings, including humans, and each component ‘must return to its own nature when the body of the man dies, moist to moist, dry to dry, hot to hot and cold to cold’. The multiple elemental forces of moist, dry, hot and cold are the most fundamental. The differences between them are the source of the differences in humours. Pain is the excess or defect of any of the multiple forces or an isolation of a humour in a particular part of the body, moving away from the place where it was well-balanced. Thus,

43 Nature of Man I.1–18.
44 Nature of Man II.2–8, 12–14.
45 Nature of Man II.17–21.
46 Nature of Man II.21–9.
47 Nature of Man III.19–23.
as both Heraclitus and Pythagoras suggest, health is rooted in establishing a harmony—relaxing what is tense and making tense what is too relaxed.49

The Hippocratic author of *Regimen*, referencing the work of various Pre-Socratics, considers the belly the source of power in the body, which organises the elements in relation to the elemental forces:

The belly is made the greatest, a steward for dry water and moist, to give to all and to take from all, the power of the sea, nurse of creatures suited to it, destroyer of those not suited. And around it a concretion of cold water and moist, a passage for cold breath and warm, a copy of the earth, which alters all things that fall in it. Consuming and increasing, it made a dispersion of fine water and of ethereal fire, the invisible and the visible, a secretion from the compacted substance, in which things are carried and come to light, each according to its allotted portion. And in this fire made for itself three groups of circuits, within and without each bounded by the others: those towards the hollows of the moist, the power of the moon; those towards the outer circumference, towards the solid enclosure, the power of the stars; the middle circuits, bounded both within and without. The hottest and strongest fire, which controls all things, ordering all things according to nature, imperceptible to sight or touch, wherein are soul, mind, thought, growth, motion, decrease, mutation, sleep, waking. This governs all things always, both here and there, and is never at rest.50

The belly (the jar associated with the earth and the feminine in mythology) is the source of the moisture and ‘ethereal fire’, which will return in Aristotle’s account of the source of heat. As there, fire is related to moisture and air, ‘the power of the stars’, and a mixture between them (which is how Aristotle will define semen). While Thales’s claim that all things are made of water is dismissed by the Hippocrates and the philosophers who follow, Aristotle traces this insight of Thales to the observation that both seeds and what nurtures is moist ‘and that heat itself is generated by the moist and kept alive by it’, so water seems to be the source of all things, even heat.51 Aristotle reports the view that moisture nourishes fire as a view that is widely shared in *Meteorology* II.2.52

This connection between Thales and heat, and the intermingling of the elements returns in *De Anima* and *Generation of Animals*, where Aristotle explains that

49 *Nature of Man* IX.4–10.
living things come into being in earth and water ‘because there is water in earth, and air in water, and in all air is vital heat, so that in a sense all things are full of soul’. This last phrase is a reference to Thales that Aristotle mentions explicitly at *De Anima* I.5, pointing to the view that some people think that soul is throughout the cosmos, and for this reason Thales thought the world was full of gods.

Thales is caricatured as the thinker of water, but the few references to Thales we have show that his account connects some elemental capacity of water to other elemental forces, such as heat, and to soul. Anaximenes assigns the role Thales assigns to water to air, and as for Thales, Anaximenes’s position is not naïve. As for the Hippocrates and Aristotle, Anaximenes maintains that the elemental forces of cold and hot and moisture do specific work, which is to cause movement. Hot and cold are the most fundamental components of generation because they are the cause of rarefaction and condensation. Despite these common themes, Aristotle reduces Anaximenes’s contribution to ‘Anaximenes and Diogenes make air, rather than water, the material principle above the other simple bodies.’

Aristotle draws attention to the view of Anaximander that opposites are present in and separated out of the one, and to Empedocles and Anaxagoras who suppose that there is one and many because things are separated out of a mixture. Simplicius explains Anaximander’s view to be that because the four elements changed into one another, none of them could be a substratum, which would not seem to be a stable underlying thing, so that had to be something else, what Anaximander calls the ἀπειρών. For Anaximander, the elemental forces such as the moist and dry, hot and cold are most fundamental, and the ἀπειρών looks like the prime matter that many scholars locate in Aristotle’s metaphysics. Anaximander traces the source of the generation of the celestial bodies (at least the sun and moon) to hot and cold which form the sun and moon out of the ἀπειρών.

Anaxagoras, following a century later, offers a similar view to Anaximander, though he denies the intermediate role of the elements and makes what is that is

53 GA 762a19–20.
54 *De An.* 411a8–9.
58 *Phys.* 187a20–3.
mixed and dissolved the ἀπείρων, the infinite or indeterminate in which everything has a part of everything else within it. More importantly, Anaxagoras introduces the organising role of νοῦς, or mind, that which is unmixed and transcends that which is mixed and organises it, setting up precursors to Aristotle’s hylomorphism. Recalling the role of Zeus in Hesiod and thinking (νοεῖν) in Parmenides, Anaxagoras associates reason with the cause and principle of what is.

Thales, Anaximenes and Anaximander are addressing a question later thematised by Parmenides regarding whether change is possible. Parmenides maintained that there is only what is, what is cannot be related to what is not, and therefore, there can be no coming into being, which would associate what had not been to what is now. For Parmenides, what is and what remains the same is what is thought, νοεῖν. The Milesians address this question by saying that what is most is the elemental. Change occurs, but what remains as it is – the elemental.

Given the Hippocratic concern with the role of the elements and elemental forces, Empedocles seems like one of the most Hippocratic of Pre-Socratics, and closest in time, historically. Aristotle argues that Empedocles is the first to make the material ‘elements’ four. Connecting the gods to the philosophers, Empedocles speaks of the elements in a way that makes them very much personified and active, calling the four roots of all things ‘shining Zeus, life-bringing Hera, Aidoneus [Hades], and Nestis [Persephone] who with her tears waters mortal springs’. Zeus is fire, Hera air, Hades earth, and Nestis water. The personalities associated with each make this account of material far from a passive substratum.

Like Anaximenes, who argues that condensation and rarefaction are the causes of things coming to be and passing away, and Anaxagoras, who argues for a mixing and dissolving guided by Νοῦς, Empedocles recognises equal and opposite causes that generate and destroy by joining and separating, and he calls these Love (Φιλότης) and Strife (Νεῖκος). Love is both destructive and productive, destroying the individual being of a thing by joining it to others to make something new. Strife too is both destructive and productive, destroying what had been joined and creating something new. As Empedocles writes, ‘Double is the birth of mortal things and double their failing.’

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61 Anaxagoras, Fr. 1 in The Presocratic Philosophers, pp. 357–8.
63 Meta. 985a31–3.
64 Fr. 6, Aetius I, 3, 20 in The Presocratic Philosophers, p. 286.
65 Fr. 17, Simplicius, Phys. 158, 1, 13 in The Presocratic Philosophers, pp. 289–90.
66 Fr. 17, Simplicius, Phys. 158, 1 in The Presocratic Philosophers, p. 287.
The continuous movement of Love toward the centre and Strife toward the peripheries leads to a constant cycle of generation. 67

The association of Love and Strife in Empedocles reminds us of the strife that follows from coupling in Hesiod’s works. There is a sense in which joining itself produces the conflict that then leads to the separation, and the separation itself cannot last – what is drives itself back toward all the other things that are, which leads to further coupling, which then leads to divisiveness again (unconscious uncoupling, one might say). Empedocles sees the fundamental bases of material existence in the four elements. Aristotle seems to follow the Hippocratics in seeing the elements themselves as composed of elemental forces.

Anne Carson points to the way that the association with wetness and dryness becomes valued. 68 Diogenes of Apollonia associates intelligence with dryness: ‘Understanding is the work of pure and dry air. For moisture hinders intelligence, wherefore in sleep and in drunkenness and in surfeit understanding is diminished.’ 69 (Intelligence will become associated with coolness in Aristotle.) 70 Carson argues that emotion, anxiety and fear were associated with wetness for the Greeks from Aeschylus to Sophocles to the Hippocratics. 71 Heraclitus calls a dry soul wisest and best (σοφωτότερη καὶ ἀριστή). 72 Whether Heraclitus makes this judgment against water and wetness is not so obvious since another fragment, one which makes him sound much more like Empedocles, suggests that soul is just another of the elements: ‘For souls it is death to become water, for water it is death to become earth; from earth water comes-to-be, and from water, soul.’ 73 While the dry soul is wisest, Heraclitus’s soul seems to come from water, in a way that will be reflected in Aristotle’s account of generation, where soul is in the semen that is comprised of water and air, the source of the heat in semen.

Heraclitus seems to agree with Anaximenes and Empedocles (and eventually, Aristotle) that the elements change into one another. The source of the

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67 Fr. 35, Simplicius, *De Caelo* 529, 1 in *Phys.* 32, 13, 3–17 in *The Presocratic Philosophers*, pp. 296–7. Aristotle takes issue with Empedocles’s account of the relation between Love and Strife in the forming of the cosmos because Empedocles could not explain the immobility of the Earth (*De Caelo* 295a29). Aristotle is concerned that Strife seems too much like chance in Empedocles’s account, and so it can’t explain how in fact certain elements move to the places they do (*GC* 344a1).

68 Anne Carson, ‘Putting Her in Her Place’.


70 *PA* 652a35–7.

71 Carson, ‘Putting Her in Her Place’, p. 138.

72 Heraclitus, Fr. 118 in *The Presocratic Philosophers*, p. 203.

73 Heraclitus, Fr. 36 in *The Presocratic Philosophers*, p. 203.
process through which this happens on Heraclitus’s terms is through fire. Fire catalyses the transition between opposites: Heraclitus calls god ‘day night, winter summer, war peace, satiety hunger’, saying that god changes as fire takes on the scent of spices when it is mixed with them.\textsuperscript{74} Fire turns the sea into earth.\textsuperscript{75} And fire is that for which all things can be exchanged, just as gold is exchanged for goods, making it, like money, that through which things pass and the measure of those things.\textsuperscript{76} Heraclitus references fire (and Zeus, the divine ἀρχή or measure) when he says that the thunderbolt steers all things,\textsuperscript{77} and that the sun, the ‘brightest and hottest’, maintains the proper boundaries.\textsuperscript{78}

The Pre-Socratics pose the questions that lead Aristotle to articulate the need for a formal and material cause (Aristotle offers four causes, but explains that in natural things, the efficient, formal and final causes coincide). The essence and the stuff of a thing both explain what it is. The Pre-Socratics articulate how change between elements can be explained and how particular elements drive that change. If Aristotle points to the need for a formal and material cause to explain what is, the Pre-Socratics point to these dual roles in the elements of fire and moisture, which it turns out, will return in Aristotle.

**Hippocrates, Elemental Powers and Gender**

The Pre-Socratics set the background to the role of elements in the Hippocrates and the philosophers of the fifth and fourth centuries BCE. But how do the elements become gendered? This section draws together Pre-Socratic claims with Hippocratic conceptions of gender. The notion of wetness as feminine could be traced to the conception of Pandora as the leaky jar. Carson argues that the wetness of woman is connected to the view that woman lacks boundaries in contrast to the dry boundedness of men.\textsuperscript{79} Women are the content, what is bounded, fluid and wet, while man is the form, what bounds. In Hesiod, the innate wetness makes women’s sexual appetite insatiable: because women are wet, they don’t need to stop. Because they lack σοφροσύνη, they do not think to stop. The wetness of women’s bodies, in Carson’s words, ‘threatens the essence of a man’s manliness’.\textsuperscript{80} Carson explains Hesiod’s description of woman in *Works and Days*, ‘The voracious woman, by her unending sexual demands,'
“roasts her man” in the unquenchable fire of her appetite, drains his manly strength and delivers him to the “raw old age” of premature impotence.\(^{81}\) Here, the woman is fire as well as moisture. As Carson puts it, woman is more associated with the elemental, and so with the δύναμις of nature. As a leaky jar like Pandora, woman is an unbounded sieve that needs proper boundary. Marriage binds a woman to a man, bounding the material overflow of woman.\(^{82}\)

The view of woman as wetness needing binding might seem to contradict the Hippocratic notion that sexual intercourse permits a flow that would otherwise strangle a woman, since here marriage becomes that which binds up an excessive flow. But it is possible that the flowing and the binding occur in marriage and motherhood. As wet and fluid, women need to flow, but they cannot manage their own elemental nature; something external is required to prompt the flow and to keep it within its bounds.

King argues that the wetness of women pervades the Hippocratic corpus.\(^{83}\) In *Airs, Water, Places*, women are described as wetter than men.\(^{84}\) Females incline toward water; males toward fire, which is why women thrive from cold and moist food and drink and men from hot and dry food and drink. As the Hippocratic author writes in *Regimen I*, for a man to produce a girl offspring, he needs to have more water; for a boy, he needs to take up a regimen with more fire.\(^{85}\) The Hippocratics recommend intercourse just after menstruation for those who want to conceive because then the uterus and connected passages are empty so the seed would not be overcome with moisture.\(^{86}\) As Dean-Jones notes, there was only one day in each month when the womb was dry enough

\(^{81}\) Ibid. p. 141.

\(^{82}\) Ibid. p. 143. See Xenophon, *Oeconomicus* 3.7–10.

\(^{83}\) King argues that commentators have tried to produce distinct authors for the different texts in the Hippocratic corpus in order to explain differences and variation either in terms of different times texts were written or different authors who wrote them. Another way the discrepancies were explained was in terms of ‘schools’ of medicine, with one at Cos and one at Cnidos. King argues that the notion that a text could have authority without clear authorship was an embarrassment to classical scholars, so they sought ways to indicate authorship. For all this, King argues, the perceived discrepancies in the text are not discrepancies but different recommendations for the virgin and the adult woman in *Hippocrates’ Woman: Reading the Female Body in Ancient Greece*, pp. 65–6.

\(^{84}\) *Airs, Water, Places*, 10.

\(^{85}\) *Regimen I*.27.1–9.

\(^{86}\) As the Hippocratic author writes in this passage, ‘Now if the fire fall in a dry place, it is set in motion, if it also master the water emitted with it, and therefrom it grows, so that it is not quenched by the onrushing flood, but receives the advancing water and solidifies it on to what is there already. But if it fall into a moist place, immediately from the first it is quenched and dissolves into the lesser rank.’ *Regimen I*.27.18–25.
to conceive a boy. When Aristotle argues that it is not too much moisture, but too much matter that prevents conception, he is associating matter with moisture while rejecting the notion that it is the moisture that is the problem for conception; rather the materiality, which is moist, is.

Breath, too, for the Hippocrates, as for Aristotle, plays a crucial role in generation. In *Nature of the Child*, the Hippocratic author describes the process of reproduction as the mingling of male and female seed, which becomes thicker when it is mixed. Because the process occurs in a warm place it is able to take in the mother’s breath as breath and when it is filled with this breath, a passageway out is formed, which becomes the umbilical cord. Through the passage, cold breath is drawn from the mother and warm breath exits. The author writes that all things that are warmed take in breath, and the umbilical cord, which is formed through this path out, allows it to take in nourishment. The warmed seed grows from the blood that comes into the uterus from the mother – blood is drawn in along with breath through the umbilical cord. The congealing blood forms flesh. In this way, the Hippocrates join the work of air and moisture and heat.

Too much moisture for the Hippocrates can mean too much heat, which can harm a woman. During pregnancy, blood flows each day to increase the flesh of the seed as it grows. A woman who is not yet pregnant can sense whether the blood within her is cold or hot because she is moister. When the blood is stirred up and fills her vessels, some separates off. If a woman is empty, she becomes pregnant, but if she is full, she does not. If the blood that was stirred up stays in the uterus and the uterus becomes warm and makes the rest of the body warm this can lead to lameness in the woman. The lack of flow can make the woman’s body infirm.

The Hippocratic author describes the process of growth after conception through the work of breath, which increases the flesh. Breath moves parts to other parts that are similar to it, ‘the dense to the dense, the rarified to the rarified, and the moist to the moist’. While the Hippocrates use opposites to heal by contrast to Asklepios, in development like associates with like to

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88 GA 727b10–11, Dean-Jones, *Women’s Bodies in Classical Greek Science*, p. 186. Ann Ellis Hanson argues that Aristotle’s discussion of wetness and women’s health was not original, but all over the Hippocratic Corpus in ‘Conception, Gestation, and the Origin of Female Nature in the Corpus Hippocraticum’. On her account, Aristotle associates the female with moisture in a context in which this view is taken as the background assumption.
89 *Nature of the Child* 1, 3.
90 *Nature of the Child* 4.
grow.92 Heat solidifies the bones, making them hard. ‘Each of these things is articulated by breath, for through the force of blowing all things separate according to their kind.’93

The main problem the elemental forces present in the body in generation is the possibility of excess of any particular one. Moisture can feed heat. So does breath. The woman’s body that is full of moisture can become a problem. While intercourse might open the pathways to flow to let moisture out as mentioned above, another solution was in a woman’s own body. The Hippocratic author of Gland suggests that the breasts’ task was to draw off excessive moisture from the woman’s body. The loss of a breast would lead to death because the breast would be unable to draw off moisture.94

In Places in Man, the Hippocratic author allows that different people have different constitutions – some hotter and some colder. Pain is produced by that which is opposite to each person’s general constitution. In the cold, pain is produced by heat; in the dry by wetness.95 As King writes in a way that resonates with Socrates’s efforts to cure Charmides in Plato’s dialogue of the same name with a charm that turns out to be a dialogue about self-knowledge, ‘To know your painkiller, you must know yourself.’96

Conclusion

Some dispute remains among scholars of the Hippocratics and Aristotle’s biological works over how much Aristotle was familiar with their work and drawing on it. Bartoš articulates the Hippocratic contribution as the notion that fire and water are the elemental principles, where fire moves and water nourishes.97 The

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92 King, Hippocrates’ Woman, pp. 103–4. King contextualises the differences between Asklepians doctors and Hippocratics, noting the reasons patients might seek out religious medical advice instead of Hippocratic help. Some patients may have preferred Asklepios to Hippocrates because Hippocratic practitioners might ask questions about the past that could be embarrassing but Asklepians would not. But the Hippocratics may have been more effective. Temple treatment was perceived as more pleasant than the Hippocratic, p. 111. For these reasons, King objects to the opposition between the religious model and the Hippocratic model in the scholarship and finds them more often to go hand in hand. She argues against drawing the wrong conclusions from absence of evidence, p. 105.

93 Nature of the Child 6.

94 Gland 17.

95 Places in Man, 42.

96 King, Hippocrates’ Woman, p. 121.

97 For a review of the history of the debates, see Hynek Bartoš, ‘Aristotle and the Hippocratic De Victu on Innate Heat and Kindled Soul’. 
Hippocratics inherit the concept of vital heat from the Pre-Socratics, which then influences Aristotle. Dean-Jones argues that ‘menstrual blood is the linchpin of both the Hippocratic and the Aristotelian theories on how women differed from men’. For both the Hippocratics and Aristotle, women ‘could not convert to their own cause’ the blood or moisture which characterised them, though breath seems to do significant work in women in generation for the Hippocratics. The difference between Aristotle and the Hippocratics is that for the Hippocratics, there was ‘no natural analogue in a man’s body’ to blood, which was the source of all women’s problems. Its excess ‘led women to pass their lives teetering on the brink of ill health’, and the monthly draining of it kept women from dying. But Aristotle takes the moisture of menses to correspond to the heat of semen, though he describes menses and semen as developing through the same process. In contrast to the Hippocratics, Dean-Jones argues, Aristotle does not think the production of menses benefits the women’s body.98

Several themes seem to emerge from the study of Greek mythology, Pre-Socratics and Hippocratics that return in Aristotle. Women pose a problem to the ancient Greeks who organise their families and communities in terms of patriarchal power where men dominate public life and women are secreted in private. The problem of women arises because within these assumptions of male superiority, women are clearly crucial to the work of reproducing society, which seems to uniquely empower them. Women are associated with moisture from Hesiod through the Hippocratics. For Hesiod, this association makes women’s sexual desire insatiable. The wetness of women’s bodies threatens to overtake men’s bodies. As wet, woman is like a leaky jar. Aristotle in associating women with moisture is picking up on a cultural understanding that also associated men with fire. The moisture of women could be generative and excessive, just as the fire of men could be generative and destructive. Both were capable of consuming what was before it.

The Pre-Socratics point to various elements or all the elements together to explain continuity and change in nature. The Hippocratics say natural things have a multiple material basis, which explains how they can suffer and be healed, a notion that Aristotle draws on, also traceable to Anaximander and other Pre-Socratics, in considering the structure of acting and being acted upon. Like the Hippocratics, Aristotle understands elemental forces as fundamental forces, though he takes them to always exist in elements. The Hippocratics carry over from mythology the notion of the belly as a source of power in the body, which Aristotle adapts by considering the stomach as the earth of the

body. Aristotle similarly seems to take from the Pre-Socratics the notion that natural things are formed from an interaction between material elements and organising forces, as when Aristotle concludes that the world is full of soul. Pre-Socratics like Anaxagoras establish a distinction between what is indeterminate and mind, in a way that influences a tradition of commentary that sees material as the indeterminate and form as intelligible.