



PROJECT MUSE®

The Invention of Infertility in the Classical Greek World: Medicine, Divinity, and Gender

Rebecca Flemming

Bulletin of the History of Medicine, Volume 87, Number 4, Winter 2013,
pp. 565-590 (Article)

Published by Johns Hopkins University Press

DOI: <https://doi.org/10.1353/bhm.2013.0064>



➔ *For additional information about this article*

<https://muse.jhu.edu/article/532465>

The Invention of Infertility in the Classical Greek World: Medicine, Divinity, and Gender

REBECCA FLEMMING

SUMMARY: The article examines the understandings of, and responses to, reproductive failure in the classical Greek world. It discusses explanations and treatments for non-procreation in a range of ancient Greek medical texts, focusing on the writings of the Hippocratic Corpus, which devote considerable energy to matters of fertility and generation, and places them alongside the availability of a divine approach to dealing with reproductive disruption, the possibility of asking various deities, including the specialist healing god Asclepius, for assistance in having children. Though the relations between these options are complex, they combine to produce a rich remedial array for those struggling with childlessness, the possibility that any impediment to procreation can be removed. Classical Greece, rather than the nineteenth century, or even 1978, is thus the time when “infertility,” understood as an essentially reversible somatic state, was invented.

KEYWORDS: infertility, ancient medicine, divine healing, gender, reproduction, Hippocratic Corpus, Asclepius

Infertility has had a rapidly rising scholarly profile, across a host of fields and disciplines, since the 1980s. The explosion in assisted reproductive technologies (ARTs) may be the main force behind this rise, but the debates have moved well beyond the technologies, just as the technologies have moved well beyond infertility.¹ Historically, however, the topic

This article has emerged within the framework of the Cambridge University Generation to Reproduction Project, supported by a strategic award from the Wellcome Trust (Grant no. WT 088708). Parts of it have been presented at a range of seminars and conferences, and I would like to thank all the audiences for their questions and suggestions; as well as the *Bulletin's* reviewers for their comments and criticisms.

1. For a definition of ARTs, and some basic information and statistics, see, e.g., Charis Thompson, *Making Parents: The Ontological Choreography of Reproductive Technologies* (Cambridge, Mass.: MIT Press, 2005), 1–4. Thompson also stresses the sense in which ARTs and infertility are no longer coterminous.

remains underdeveloped, if not actually stunted and misshapen. Indeed, there are those who would deny that infertility has much of a past at all. Thus, in their contribution to an excellent recent collection of essays aiming, precisely, to broaden and deepen, discussion of reproductive failure around the world, Margarete Sandelowski and Sheryl de Lacey claim that “infertility was ‘invented’ with the in vitro conception and birth in 1978 of Baby Louise.”² The argument is not, of course, that there had been no procreative problems, or involuntary childlessness, before 1978, but that the new technological developments that came to fruition that year were, and are, a real game changer. “*In-fertility*” thus has a prehistory: it was, they say, preceded by *barrenness* and *sterility*, “used to connote a divine curse of biblical proportions” and “an absolutely irreversible physical condition,” respectively.³ Whereas “infertility” itself signifies a “medically and socially liminal state in which affected persons hover between reproductive incapacity and capacity,” which emerged when “both infertile couples and their physicians began to expect that virtually any kind of biological or physical impediment to reproduction could eventually be bypassed, even if not removed or cured.”⁴

The implication that procreative disruption was left entirely untreated by medicine up to that point, that doctors could not and did not offer assistance to those struggling to have children before 1978, is, of course, patently false. The point had already been made by Naomi Pfeffer. She begins her story about the British development of reproductive medicine right through the twentieth century by railing against the general impression that, prior to the introduction of ARTs, involuntarily childless women were mostly fatalistically resigned to their lot, and, if not, appeals to divine intervention or attempts at human adoption were their only options.⁵ While Margaret Marsh and Wanda Ronner had asserted, more precisely, that “the medicalization of infertility began nearly two centuries ago, not in the 1970s,” at least in North America, where their historical narrative

2. Margarete Sandelowski and Sheryl de Lacey, “The Uses of a ‘Disease’: Infertility as Rhetorical Vehicle,” in *Infertility around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies*, ed. Marcia C. Inhorn and Frank van Balen (Berkeley: University of California Press, 2002), 33–51, quotation on 34. I should say that this article is, apart from this point, also excellent, and I engage with many other of the important critical moves it makes throughout this piece; in addition, it is clearly the case that ARTs do make a real conceptual difference, but I would suggest that it is actually more helpful to see them as refiguring the field of fertility, rather than putting the emphasis on *infertility* in this respect.

3. *Ibid.*, 34–35.

4. *Ibid.*, 35.

5. Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge: Polity, 1993), 1.

is located.⁶ They even deployed some of the same terminology as Sandelowski and de Lacey in describing this crucial early nineteenth-century shift: from “barrenness,” that is, for them, childlessness understood as personal misfortune, a manifestation of god’s will like so much else, and responded to in the same register, to “sterility,” a medical condition that called for therapeutic intervention, and should be treated by physicians.⁷ Moreover, as their account repeatedly demonstrates, these doctors—such as the infamous J. Marion Sims—were certainly not lacking in confidence about their ability to cure “sterility,” for them an eminently reversible somatic state.⁸ And, while Sims’s surgical approach does not now appear promising, much else in the more standard healing repertoire of the time could well have been more helpful. The etiology of infertility remains complex and uncertain: it may involve psychological and social factors, as well as biology, so, the simple fact of treatment, and taking appropriate action, changing behavior in certain ways, could be effective.⁹

There are, however, reasons to push the “medicalization” of infertility back a good deal further than the nineteenth century, at least in the more flexible, less hegemonic sense that the process, the extension of medicine’s reach and grip, tends to be understood by those working in earlier periods.¹⁰ Discussions of, and remedies for, reproductive failure form an integral part of medical traditions in the “Old World” at least all the way back to the ancient Greek writings of the Hippocratic Corpus in the late fifth and early fourth centuries BC, and it seems unlikely that these embedded understandings and practices would not have had more of an impact in the “New World” than Marsh and Ronner allow.¹¹ Not

6. Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore: Johns Hopkins University Press, 1996), 255.

7. *Ibid.*, 10.

8. On Sims and his colleagues, see *ibid.*, 40–74.

9. This point about etiology is, indeed, emphasized by Sandelowski and de Lacey, “Uses of a ‘Disease’” (n. 2), 35.

10. On early “medicalization,” see, e.g., Michael McVaugh, *Medicine before the Plague: Practitioners and Their Patients in the Crown of Aragon, 1285–1345* (Cambridge: Cambridge University Press, 1993), 190–235 and Silvia De Renzi, “The Risks of Childbirth: Physicians, Finance and Women’s Deaths in the Law Courts of Seventeenth-Century Rome,” *Bull. Hist. Med.* 84 (2010): 549–77, esp. 554.

11. For a pharmacologically focused catalogue of this history, see, e.g., Annette Josephs, *Der Kampf gegen die Unfruchtbarkeit: Zeugungstheorien und therapeutische Massnahmen von den Anfängen bis zur Mitte des 17. Jahrhunderts* (Stuttgart: Wissenschaftliche Verlagsgesellschaft, 1998); and for more detailed analysis of aspects of some episodes, see, e.g., Simon Byl and A. F. De Ranter, “L’étiologie de la stérilité féminine dans le *Corpus Hippocratique*,” in *La maladie et les maladies dans la Collection hippocratique*, ed. Paul Potter et al. (Quebec: Éditions du Sphinx, 1990), 303–22, and Laurence Totelin, *Hippocratic Recipes: Oral and Written Transmission of*

that medical models of infertility dominated ancient, medieval, and early modern societies the way they do today; but they were always a meaningful presence, always coexisted, jostled and overlapped, with a range of other approaches and constructions, including those of a more religious character. The precise configuration, the relations between and orderings of these construals and practical possibilities, their relative weight and actual content, varied in different times and places, but medicine was always a significant player. Indeed, Monica Green has recently argued that infertility had a particularly important part in driving key medical developments in the Medieval West: that is, the masculinization of women's medicine.¹²

This article, therefore, takes the story back to classical Greece and the world of Hippocratic medicine, in more depth and detail. It argues that, though what preceded the development of the earliest surviving Greek medical writings is rather obscure, and so exact beginnings are hard to pin down, the Hippocratic texts themselves operate with a notion that closely resembles Sandelowski and de Lacey's definition of "infertility." Considerable energy was dedicated to the treatment of reproductive failure by Hippocratic physicians, within an essentially physical model of cause and cure. The restoration of full generative capacity was an integral part of the learned medical project, pursued with vigor and confidence, though no guarantee of success. Expectations of a positive outcome were, moreover, further bolstered by the possibility of appealing to a divine physician such as the preeminent healing deity of the classical Greek world, Asclepius. He is recorded as always accomplishing the required cure in his sanctuaries, resolving any bodily problem brought to him in an appropriate manner, problems that included childlessness, as well as, for example, blindness, paralysis, dropsy, and consumption.

Nor were these the only remedial approaches to reproductive failure available in the classical Greek world, either in the mortal or immortal domains, and other options, the wider frameworks of understanding and action operative, are briefly explored too. The notion of barrenness as divine punishment, as "divine curse," however, is found only in the realm of the imagination, though looser ideas of fate and fortune, which implicate the gods in human existence in more diffuse ways, were current, and could contribute to making sense of a couple's childlessness, and other

Pharmacological Knowledge in Fifth- and Fourth-Century Greece (Leiden: Brill, 2009), 197–224, on classical Greece; and Joan Cadden, *Meanings of Sex Difference in the Middle Ages: Medicine, Science, and Culture* (Cambridge: Cambridge University Press, 1993), 228–58, on medieval theories of sterility. Marsh and Ronner do allow some: *Empty Cradle* (n. 6), 2–3 and 10–11.

12. Monica H. Green, *Making Women's Medicine Masculine: The Rise of Male Authority in Pre-Modern Gynaecology* (Oxford: Oxford University Press, 2008), esp. 85–91.

aspects of life. Such a feeling might lead to seeking the help of a deity in resolving the issue, perhaps after trying more customary remedies, and/or specialist medical treatment, perhaps as the first response to procreative difficulties; for the powers of the gods are importantly and intrinsically encompassing. The divine capacity for somatic intervention is absolute, not determined by etiology. It did not matter whether the cause of the problem was natural or supernatural, both or neither; the gods can put it right, without deciding, that is part of being a god.¹³

It should also be said that this mix of models of explication and action in respect to involuntary childlessness is not necessarily a contrast with today. For late modernity has not rejected notions of miracle births and pilgrimages “for pregnancy,” but subsumed them within medicine.¹⁴ Even then human infertility exceeds its boundaries. It does not easily fit into the category of disease, as the relationship between reproduction and health is too indirect, and the physical dimension of the problem sometimes very indistinct; nor do clinics always offer what would traditionally be considered cures; many treatments are more ways of working round than resolving the somatic failures implicated.¹⁵ The ancient world grappled with the same combination of conceptual slipperiness, and practical importance; but in its own ways, with a rather different set of institutional and resource issues at stake (or not), a different set of ideological and professional concerns in play. And, of course, in a divergent demographic context from that of the modern West, though patterns of fertility and mortality in other parts of the contemporary world are more comparable to those of antiquity.¹⁶

13. They might choose not to, of course; and there were often some limits to their powers; they usually operated under some kind of material constraint and could not make matter do impossible things, though not always: see, e.g., Henk Versnel, *Coping with the Gods: Wayward Readings in Greek Theology* (Leiden: Brill, 2011), 379–438, for a general discussion of divine omnipotence in the classical world.

14. As illustration see, e.g., Mark Perloe and Linda G. Christie, *Miracle Babies and Other Happy Endings for Couples with Fertility Problems* (Harmondsworth: Penguin, 1987). Marcia C. Inhorn talks of “pilgrimages for pregnancy,” including to doctors and holy sites, in her *Quest for Conception: Gender, Infertility and Egyptian Medical Traditions* (Philadelphia: University of Pennsylvania Press, 1994), 3; and the growing phenomenon of “reproductive tourism” also has pilgrimage elements in it.

15. As discussed and analyzed in Sandelowski and de Lacey, “Uses of a ‘Disease’” (n. 2).

16. The structures and dynamics of various ancient populations, and their location within broader patterns of demographic history, are currently much debated: see, most recently, e.g., Claire Holleran and April Pudsey, eds., *Demography and the Graeco-Roman World: New Insights and Approaches* (Cambridge: Cambridge University Press, 2011). That infertility is always an issue, in both high- and low-fertility regimes, is one of the key themes of the Inhorn and van Balen volume, *Infertility around the Globe* (n. 2), esp. 3–32.

All this is to say that this article makes a particular argument about historical continuity, not any more global claims, one that is focused on the notion of infertility itself, rather than the rich variety of its lived experience. For reasons of space, and evidence, matters of state policy, the law, and family structure, not to mention the detail of social attitudes and cultural sensibilities, are left largely to one side. The hope is that further exploration will follow, now within a sounder conceptual framework.

Infertility and Medicine

The “Hippocratic Corpus” is the name given to a heterogeneous group of around sixty anonymous Greek medical texts mostly composed in the eastern Mediterranean over the late fifth and early fourth centuries BC and subsequently associated with the most famous physician of that era—Hippocrates of Cos.¹⁷ Among the various topics covered by these writings, in a range of styles, are human generation and the diseases of women. There are ten treatises, of disparate size and approach, dedicated to these subjects, which are also engaged with more widely across the Corpus. These “gynecological” works, as they are often labeled, enjoy a particularly complex set of interrelationships, since substantial amounts of material are shared between several of them, and there are some suggestions of cross-referencing too.¹⁸ Matters are further complicated by the decision of the key nineteenth-century editor of the Hippocratic writings—Émile Littré—to group three of these texts, *Diseases of Women* (*Gynaikēia*) 1 and 2 and *On Infertile Women* (*Peri Aphorôn*), into one large work, numbering their sections sequentially, despite the fact that they were considered to be distinct in the ancient world.¹⁹ Still, the (much debated) details are of little concern here; the point is simply that the earliest extant Greek medical writings include extensive and elaborate discussion of reproductive failure and its treatment.

Interest in infertility at the time is further emphasized by both the reported views of the famous fourth-century BC physician Diocles of Carystus about its causes, and the roughly contemporary explanatory

17. On the creation of the Hippocratic Corpus and its relationship to Hippocrates, see, e.g., Wesley D. Smith, *The Hippocratic Tradition* (Ithaca, N.Y.: Cornell University Press, 1979), 199–204; and Vivian Nutton, *Ancient Medicine*, 2nd ed. (London: Routledge, 2013), 53–71.

18. See, e.g., Totelin, *Hippocratic Recipes* (n. 11), 9–13, for discussion.

19. See, e.g., Erotian's first-century AD list of Hippocratic works in the preface to his lexicon (E. Nachmanson, ed., *Erotiani Vocum Hippocraticarum collectio eum fragmentis* (Uppsala: Appelberg, 1918): 9, 14–15, and subsequent references to the texts. The numeration is then simply to distinguish two texts of the same title (like *Prorrhetic* or *Diseases 1* and 2).

discussions of the topic in the Aristotelian Corpus.²⁰ *Generation of Animals* contains a brief summary of the reasons why some humans cannot procreate, and there is further coverage in Aristotle's *History of Animals*, most especially in the tenth book, though its authorship and inclusion in that work are both debated.²¹

There is variation in approach, explanation, and treatment among these texts—within the Hippocratic Corpus and beyond—but there is also considerable shared ground, at the most fundamental level. An agreed point of departure is provided by *History of Animals* 10, which opens with this statement: “The cause of a man and woman’s failure to generate, when having intercourse with each other, resides sometimes in both, sometimes in just one or the other.”²²

There is further consensus on then passing over the recognized possibility of male responsibility for the lack of procreative success in practice. The theory may be mentioned, but without any remedial engagement.²³ The matching of parts and pace required of the couple also receives short discursive shrift, leaving the way open for attention to be lavished on women, on problems with the female body.²⁴ These are very numerous, but the almost endless variegations of detail can be grouped under four main headings: the anatomical configuration; the alignment and flexibility of the mouth of the womb; the shape, size, composition, and internal environment of the uterus itself; and the woman’s overall health

20. On Diocles’s dates and intellectual context, see Philip van der Eijk, *Diocles of Carystus*, vol. 2 (Leiden: Brill, 2001), xxxi–viii; and his views on infertility are contained in Frs. 42–43 (Philip van der Eijk, *Diocles of Carystus*, vol. 1 [Leiden: Brill, 2000], 86–91). The fragments come from later collections of views on key theoretical questions such as the causes of reproductive failure; this distance means that they are not discussed further here.

21. Arist. *GA* 746b16–747a22; *HA* 9.6 (585b9–29); and all of *HA* 10. For recent contributions to the debate on the latter, see, e.g., Philip van der Eijk, “On Sterility (*Hist. an.* 10), a Medical Work by Aristotle,” *Class. Quart.* 49 (1999): 490–502; and Lesley Dean-Jones, “Clinical Gynecology and Aristotle’s Biology: The Composition of *HA X*,” *Apeiron* 45 (2012): 180–99.

22. Arist. *HA* 10 633b.13–14: ἀνδρὶ καὶ γυναικὶ τοῦ μὴ γεννᾶν ἀλλήλοις συνόντας τὸ αἴτιον ὅτῃ μὲν ἐν ἀμφοῖν ἐστὶν, ὅτῃ δ’ ἐν θατέρῳ μόνον.

23. Arist. *HA* 10 and *GA* 746b16–747a22, as well as, in their extracted form, the views of Diocles, are all essentially theoretical, about causes not cures (though *GA* 747a3–22 provides diagnostic advice); and the first does not even refer to specific explanations for male infertility. Similarly, the few explicit Hippocratic engagements with male reproductive failure (the Scythians in *Airs Waters Places* 21, and the enigmatic *Aphorisms* 5.63) are never followed up therapeutically. All these authors are, of course, deeply committed to the importance of the male contribution to generation; but its dysfunction seems not to be medicalized.

24. Briefly discussed at Arist. *HA* 10 636b 15–23; and see also *GA* 767a13–28 for the importance of *summetria*/proportion between male and female partners. Again, however, this does not become a practical, medical matter.

and somatic balance. The cervix is crucial for the passage of the male seed into the womb, which must then close around and mix up the seeds and blood, provide the right environment for embryo formation, and be large and flexible enough to enable fetal growth.²⁵ It must also be in a properly balanced body, both to sustain and support the correct uterine qualities and activities, and provide nourishment for the fetus, through the excess material that would otherwise be evacuated in menstruation.²⁶

Much can go wrong within this framework. The mouth of the uterus can be misaligned, too hard or too soft, too open or too closed, and various physical obstructions are also possible.²⁷ The womb can be too wet or too dry, too large or too small, too smooth, or damaged by ulcers and scars, among other conditions which impair its functions.²⁸ The woman can be too fat or too thin, too wet or too dry, or subject to other humoral, or material, imbalance, or injury, that affects her reproductive capabilities.²⁹ The location, and identity, of the problem can be diagnosed, in part, from the precise point, or content, of the reproductive failure. Does the seed come out immediately after intercourse, for instance, or a few days, or perhaps a week, later? And in what condition? Or is there a pattern of repeated miscarriage, and at what stage? Does the woman menstruate regularly, in the right quantities, and evacuating fluid of the correct composition? Has, indeed, the woman previously suffered from a disease of menstrual retention? One of sufficient severity to lead to serious uterine ulceration and the resultant risk of sterility? It is a recurrent theme in

25. Arist. *GA* 746b20–33 takes a rather different approach (from both *HA* 10 and the Hippocratics), focused on the failure to produce menses, though this may be caused by anatomy or general female health.

26. The fullest Hippocratic account of conception, fetal development, and birth is to be found in *On the Seed* together with *On the Nature of the Child*.

27. In this note and hereafter, “L” refers to Littré, ed. and trans., *Oeuvres complètes d’Hippocrate*, vol. 8 (Paris: Baillière, 1853). See, e.g., *Hp. Mul.* 1 10 (8 40.15–42.1 L): alignment; *Steril.* 217 (8 418.2–3 and 6–7 L): hard/soft; *Mul.* 1 11 and 13 (8 44.1 and 50.15 L): closed and *Steril.* 213 and 241 (8 410–21–3 and 454.7–11 L): open; *Mul.* 1 20 (8 58.16 L): obstructions; cf. also *HA* 10 635a6–30 on problems with the cervix. There are repetitions of/variations on all these points (and those that follow) in *Superfetation* and *Nature of Women*. The womb may have “mouths”; see Helen King, *Hippocrates’ Woman: Reading the Female Body in Ancient Greece* (London: Routledge, 1998), 35.

28. *Hp. Mul.* 1 10 and 12 (8 42.2 and 48.10 L): too wet; *Mul.* 1 17 (8 56.8–10 L): too dry; *Mul.* 1 25 (8 66.21–68.2 L): too large/small; *Mul.* 1 21 (8 60.10–12 L): too smooth (and ulcers); and *Steril.* 238 (8 432.8–11 L): insufficiently expansive (as also *HA* 10 635b10–15).

29. *Mul.* 1 16 (8 54.12 L): too fat (cf. Arist. *GA* 726a3–6 and 746b26–9); *Aph.* 5. 44 (168.15–16 Jones [W. H. S. Jones, ed. and trans., *Hippocrates*, vol. 4 (Cambridge, Mass.: Harvard University Press, 1931)]): too thin; *Mul.* 1 16 (54.12–16L): too dry/wet; *Steril.* 213 (8 412.9–10 L): other imbalances.

Diseases of Women 1 and *2* that these illnesses are dangerous, possibly fatal, and that even if the woman is healed, she “will become infertile” (*aphoros*, literally “nonbearing”; or *atokos*, not bringing forth/nonbirthing), maybe even permanently (*aiei*) or completely (*pampan*) so.³⁰

The author of the Hippocratic treatise *On Infertile Women* thus remarks after his opening salvoes on the subject, “These are the many and varied causes in women on account of which they do not bring forth children before they are treated, and on account of which they become completely barren. It is no wonder, therefore, that women often cannot produce children.”³¹ Still, the main reason for all this discussion is treatment. This text is less confident than the rest about therapeutic success, since it has a clear category of incurability in relation to procreative difficulties, a notion of “complete” barrenness, but even that does not affect the basic drive to medical action. Thus, for this particular Hippocratic author, if the problematic condition is innate, rather than the result of disease, or some kind of pathological event, it cannot be corrected; though, otherwise there are grounds for optimism, especially if the intervention is quick and early (and, indeed, some relatively slight problems sort themselves out).³² Furthermore, while several flawed situations can arise either way, the only means of distinguishing between the two causal possibilities is through remedial endeavor, with whatever is not cured then labeled as “by nature” (*phusei*); so efforts always need to be made. Other works are more reluctant to admit of incurability, or even ignore the possibility entirely. Moreover, in *Diseases of Women 1* and *2*, the few cases of permanent or complete sterility are, quite precisely, the product of chronic disease, not birth or nature, which gets little mention; and while *History of Animals 10* does encompass pathological and congenital causes of infertility, treatability follows a different line.³³

What the Aristotelian treatment would consist in is left entirely open, but the more practically oriented Hippocratic treatises are full of

30. See, e.g., *Mul. 1* 2, 3, 5, 8 and 9: *aphoros* (8 20.3–4; 24.8–9 and 12–13; 30.3–4; 38.4–5; 40.11 L); *Mul. 2* 146: *atokos* (8 322.20–21 L); *Mul. 1* 2: *aiei aphoros* (8 20.8–9 L); *Mul. 2* 145: *aphoros pantôs*; 160: *pampan atokon* (8 320.8–9 and 338.7 L); and also Arist. *GA* 746b29–31.

31. *Steril. 213* (8 414.13–16 L): τοσαῦτα καὶ τοιαῦτα τῆσι γυναιξίν ἐστι, δι’ ἃ οὐ τίκτουσι πρὶν ἂν ἰηθῶσι, καὶ δι’ ὅσα ἄφοροι γίνονται τὸ πάνπαν· ὥστε θαυμάζειν τὰς γυναῖκας οὐ χρὴ ὅτι εἰσὶν αἱ οὐ τίκτουσι πολλάκις.

32. General discussion contained in *Steril. 213* (8 409.17–18 L: spontaneous healing; 410.19–20: speed important; 412.1–3 and 17–18 and 414.1–3: innate and pathological).

33. Hp. *Mul. 1* 2 (8 20, 8–9 L); and *Mul. 2* 145 and 160 (8 320.8 and 338.7 L) on pathological causes of permanent/total sterility; *Mul. 1* 16 (8 30.6–22 L) for the only discussion of innate flaws; cf., e.g., Arist. *HA* 10 635a2–5 and 656b1–2; and the vaguer comments at *GA* 746b33–5.

recipes and prescriptions. Some are reasonably simple, some very long and complicated, involving multiple medicaments, purging and bathing, changing diet, and much use of various probes (of tin or lead). A fairly straightforward, if not deeply attractive, remedy from *On Infertile Women* is for cases of wombs that do not retain the seed: “Take lead and a stone which attracts iron, grind them smooth, tie up in a rag, and, after dipping in the milk of a woman, use as a pessary.”³⁴

A more complex set of instructions is provided for women who want to become pregnant and bear children, but have a hardened, closed, and/or acutely misaligned cervix, whether they are childless (*ateknos*), or have previously been pregnant and delivered, but are now struggling.³⁵ This involves fumigation and purgation, then washing and the utilization of a probe (or probes) that should be covered in an emollient, to try to correct the texture, aperture, and position of the womb’s mouth. The woman is also to drink various compounds for several days: of boiled pine twigs and white wine, and of celery, cumin seed, and frankincense, accompanied by eating boiled puppy and octopus, and bathing twice a day. Similarly, a whole package of measures is deployed to try to increase the size and flexibility of the uterus in women who regularly miscarry after a couple of months.³⁶ The womb is to be inflated, and then filled with a range of expansive substances of about the right shape—the flesh of a gourd, for instance, and squirting cucumber—while the woman is to eat as much garlic as she can, combined with anything else that might cause flatulence in her belly.³⁷

Once such a therapeutic program has been successfully completed, or measures more generally promoting conception have been taken, and all seems well with the woman in question, then she is to go to her husband.³⁸ Further instructions are sometimes offered in respect to this encounter, its timing, and the ideal procreative preparations for both parties. So, for instance, she should be fasting, and he should be sober, just bathed in cold water, and well nourished with the appropriate foods.³⁹ If he wishes (and it is definitely the husband’s wishes that are referred to here) to

34. Hp. *Steril.* 243 (8 456.24–458.2 L): μόλυβδον καὶ λίθον ἥτις τὸν σίδηρον ἀρπάζει, ταῦτα τρίψας λεῖα, ἐς ῥάκος ἀπόδῃσον, καὶ ἐς γάλα γυναικὸς ἐμβάψας προσθετῶ χρήσθω.

35. Hp. *Steril.* 217 (8 418.1–2 L); cf. *Superf.* 29.

36. Hp. *Steril.* 237(8) (8 452.5–27 L).

37. The seminal profusion of the squirting cucumber may also play a role: all these ingredients are polyvalent.

38. See, e.g., Hp. *Steril.* 221, 224, 225, 238, and 243(4) (8 428, 434, 352, 458 L).

39. In this note and hereafter, “Potter” refers to P. Potter, ed. and trans., *Hippocrates*, vol. 9 (Cambridge, Mass.: Harvard University Press, 2010). Hp. *Superf.* 26 (332.21–4 Potter), and see also 30 (342.24–344.2 Potter); cf. *Steril.* 220 and 218.

produce a male child, he should have vigorous intercourse with his wife as her period is ending, or has ended, having bound up his left testicle; if he wishes to produce a girl he should tightly bind up his right testicle and have sex with his wife when her menses are in midflow.⁴⁰ The basic responsibility for fertility lies with the woman, the medical interventions focus on her body, but there are things the husband can do to help too; there are actions he can take over and above the baseline of generative possibility.

In addition to this fundamental gendering of the approach to infertility in early Greek medicine, several other points emerge from this summary. The first is that the causes of reproductive failure, though more organically focused than much Hippocratic pathology, basically fit into the overall etiological patterns of the Corpus: variations on the key themes of balance and formation.⁴¹ The action may all occur in the female body, with the uterus very much the center of attention, but the processes and situations involved are entirely generic. They could occur anywhere. Also representative is a certain looseness about the whole notion of disease itself: about what kind of deviations from normal somatic structure and functionality, from usual human capabilities and well-being, qualify as such, and how this should be categorically conceived. Thus, the sense in which non-procreation has variously appeared in these texts as both disease, and its result, is nothing special.⁴² This uncertainty is given a further twist, at least in the Hippocratic context, by the steady insistence, across the gynecological writings, that reproduction is key to female health: that infertility and women's well-being are definitely opposed, however, exactly, that contrast is to be drawn.⁴³ This is enacted in a number of different, but overlapping, ways. Thus, on a general level, women who have never given birth suffer more severely from a range of female complaints—such as menstrual difficulties and other fluxes—than those who have borne children; and may even be especially prone to apparently unconnected

40. Hp. *Superf.* 31 (344.3–9 Potter)

41. On the principles of Hippocratic pathology see, e.g., Nutton, *Ancient Medicine* (n. 17), 72–86; these broadly included, of course, the rejection of the notion of a direct and personal divine causation of disease.

42. Its appearance as disease is more implicit than the aspects of disease as cause already discussed. It is a categorization that arises from things like the opening line of *Diseases of Women I*, which says that its subject is just that—female diseases (*nousoi*)—so suggesting that all the conditions then described come under that heading, not to mention being implied (determined even) by the therapeutic responses.

43. See Ann E. Hanson, “The Medical Writers’ Woman,” in *Before Sexuality: The Construction of Erotic Experience in the Ancient Greek World*, ed. David M. Halperin, John J. Winkler, and Froma I. Zeitlin (London: Routledge, 1990), 309–38.

ailments, like lameness.⁴⁴ More specific is the “constant refrain” that “if she becomes pregnant, she is healthy,” usually only tacitly accompanied by the reverse presumption, though *Diseases of Women 2* does have one case where failure to become pregnant results in death.⁴⁵

It is also worth discussing the ancient terminology of reproductive failure in relation to notions of disease, and, indeed, wider issues of understanding and commitment. The two main terms used have been *aphoros* and *atokos*, that is, negative adjectives referring to the absence of a productive bearing, or bringing forth, and which, therefore, contain their positive versions within them, unless blocked by the fixitives, “permanently” or “completely.”⁴⁶ The point is underlined by the fact that *atokos* is deployed in these same texts to denote a woman who has not yet borne a child, regardless of whether or not she has tried; that is, it signifies a current physical state, with an open future.⁴⁷ There are, of course, ways of indicating that procreative efforts are being made, without present success, and the ancient phrasing of this, with its focus on “nongeneration,” or “nonpregnancy,” despite regular intercourse between a woman and a man, resembles modern medical definitions of “infertility” reasonably closely.⁴⁸ Particularly since, as has already been noted, Hippocratic therapeutics make it clear that this failure may follow on past production.⁴⁹

What is different, more distinctly ancient, in this medical vocabulary, is the lack of a noun equivalent to “infertility,” “sterility,” or “barrenness,” and the insistence, instead, through adjectives, participles, and periphrases, that it is infertile, sterile, or barren, individuals, bodies, and pairings,

44. Hp. *Mul.* 1 1 and 2 (8 10.1–3 and 14.8–9 L); *Mul.* 2 131 (8 280.3 L).

45. Hanson, “Medical Writers’ Woman” (n. 43), 318, and note 48 lists the examples of this statement in *Mul.* 1 and 2; see Hp. *Mul.* 2 118 (8 256.23–258.1 L) for pregnancy or death scenario.

46. Indeed the positive terms—*phoros* and *tokos*—appear in these texts themselves: *tokos* as a noun, the standard word for “birth,” but *phoros* as an adjective juxtaposed to its opposite, with movement between the two; e.g., *Steril.* 213 (8 408.17–18 and 410.19 L). Used more sparingly are the adjectives, *ateknos*—literally, “childless,” and so innately reversible: e.g., *Steril.* 217 (8 418.2 L) and *Superf.* 29 (336.23–5 Potter)—and *sterros*, the only nonprivative formation, the rarest and most specific, since it is applied only to female animals and humans: e.g., *Mul.* 2 156 (8 330.20–21 L).

47. See, e.g., Hp. *Mul.* 1 1 and 2 (8 10.1–3 and 14.8–9 L); *Mul.* 2 131 (8 280.3 L); *ateknos* also functions this way at *Steril.* 217 (8 418.2 L) and *Superf.* 29 (336.23–5 Potter).

48. The World Health Organization (<http://www.who.int/genomics/gender/en/index6.html>) provides a “medical definition” of infertility as “the failure to conceive following twelve months of unprotected intercourse”; cf., e.g., Hp. *Mul.* 1 10 and Arist. *HA* 10 633b.

49. In addition to those cases mentioned above, see also, e.g., Hp. *Superf.* 23 (330.23–5 Potter) and *Steril.* 222 (8 428.15–16 L).

that are being described, explained, and treated.⁵⁰ Indeed, it is clear that it is infertile women who are being discussed and dealt with: *aphoros* and *atokos*, though of quite broad semantic range in the realm of productivity, cannot be applied to men.⁵¹ Land and trees can be *aphoros*—barren or non-fruit bearing—and money may be *atokos*—if it does not bring forth interest, or tax revenues—but men are not; it is in the generation or begetting of children that they may be found wanting.⁵² Returning to the adjectival approach more generally, this is again part of the wider “physiological” patterns of classical pathology, in which disease entities emerge more dimly than disease processes and their results; in which illnesses are immanent in, and hard to separate from, bodies.⁵³

If one of the things at stake in notions of disease is establishing the authority for medical intervention, however, then the pathology of non-procreation is writ large across Hippocratic gynecology. Prescriptions for treatment come thick and fast, mostly targeting specific problems, particular reproductive failures, but also more generally directed, sometimes so generally that it is better to talk about “fertility” recipes, than remedies for infertility.⁵⁴ Despite the diversity that follows this specification, these shifts in approach, the cures for infertile women are again variations on shared themes. The central principle of Hippocratic therapy is that opposites cure opposites: that what has gone wrong with the body is to

50. Philosophical texts have a different approach, as Aristotle demonstrates: neither *aphoros* nor *atokos* appears within either *HA* 10 or *GA*. In the former the preference is for much more specific descriptions of the problems concerned, and the noun *ateknia*, “childlessness,” is used once (636b8), of something existing between a couple; in the latter *agonos* (“nongenerating”/“childless,” even “seedless”) is preferred for both male and female, and the noun *agonia* also appears (e.g., 746b20 and 748b8 and 12), though sometimes simply synonymously.

51. This is a stronger version of the modern gendering of the vocabulary of reproductive failure: there is a sense that infertile and sterile (though that is a less human adjective in general) sit more easily with women than men, though they can be applied to both, whereas barren is not a male word. This gendering is shared by Arist. *HA* 10 in its own way too; but not by *GA*.

52. Land: Xen. *Oec.* 20.3; trees Hdt 2.156; interest: Plato *Laws* 921c; tax: [Arist.] *Oec.* 1350a11. For men, the verbs used are, e.g., *gennaô* and *teknôô*.

53. On this general point, see, e.g., Owsei Temkin, “The Scientific Approach to Disease: Specific Entity and Individual Sickness,” in *Scientific Change: Historical Studies in the Intellectual, Social, and Technical Conditions for Scientific Discovery and Technical Invention, from Antiquity to the Present*, ed. Alistair C. Crombie (New York: Basic Books, 1963), 629–47.

54. That is, for example, all the recipes labeled as *kuêtêria* (“promoting conception/pregnancy”) at *Mul.* 1 75 (8 162.1–170.6 L): some adding “if she is not/cannot conceive/become pregnant,” others leaving the circumstances entirely open. There is also a single *atokion*: a recipe with the opposite intentions, at *Mul.* 1 76 (8 170.7–8 L).

be reversed, which is repeatedly enacted in these texts, tacitly but consistently.⁵⁵ The point can be illustrated by the cases of the two complex therapeutic programs described above. In the first, the focus was on softening, loosening, and moistening the mouth of the womb, both to open it and return it to functional flexibility, and to make it malleable enough to be realigned more extensively. Emollients are obviously all about these properties, but so are baths, puppy meat, and boiled stuffs more generally. It is just that they act through affecting the overall somatic qualities rather than through direct application on the specific part.⁵⁶ In the second, more uterine, package, the connection between the ingredients and their desired effects, of expansion and increased expandability, is more obvious; and the phallic resemblance of the gourd is made completely explicit in a neighboring recipe.⁵⁷ This is, moreover, a general pattern. Laurence Totelin has demonstrated that many of the ingredients in fertility treatments exceed their more mechanical powers and are richly sexually resonant, have greater connotative capacity than items in recipes for general complaints.⁵⁸

It is, of course, not just that the standard therapeutic repertoire is, broadly speaking, applied right across the piece—within the gynecological treatises and beyond, to infertility and all other diseases, in women and men—but that this comes, as a package, with the same, male, physicians. Moreover, this point, about men treating women, including for reproductive matters, seems unremarkable and taken for granted across all these texts. There is virtual silence on questions of social propriety and what might be considered conventional territorial divisions within the field of health care provision, especially the gendering of procreative expertise; though other ancient evidence raises issues on both fronts.⁵⁹ Generally speaking, in classical Greece, men (except husbands) were not to look at or touch the bodies, particularly the genital area, of respectable women, nor discuss intimate somatic, especially sexual, matters with them; but Hippocratic doctors, and Aristotelian researchers, clearly did all of these

55. See, e.g., Nutton, *Ancient Medicine* (n. 17), 87–103.

56. In this note and hereafter, “Joly” refers to R. Joly, ed., trans. and notes, *Hippocrate: Du régime* (Paris: Les Belles Lettres, 1967). As detailed in Hp. *Vict.* 2.57: baths, and 4: puppies (58.20–59.9 Joly).

57. Hp. *Steril.* 222 (8 430.4–432.2 L).

58. Totelin, *Hippocratic Recipes* (n. 11), 197–224.

59. It should be said that these conventions may be more historiographical than historical; see, e.g., Monica H. Green, “Women’s Medical Practice and Healthcare in Medieval Europe,” in *Sisters and Workers in the Middle Ages*, ed. Judith Bennett et al. (Chicago: University of Chicago Press, 1989), 39–78; and reprinted in her *Women’s Healthcare in the Medieval West* (Aldershot: Ashgate, 2000).

things, with barely a murmur.⁶⁰ In addition, both the playwright Aristophanes and the philosopher Plato attest to the contemporary existence of a group of female specialists in the business of pregnancy and delivery—*maiai*, usually translated as “midwives”—though neither testimony is straightforward.⁶¹ Here there is some overlap with the medical writings, however, though rather less than might have been expected. The brief, theoretically dense, Hippocratic text *On Fleshes* refers to *akestrides*, healing women who attend on births as the best people to ask about the viability of seven-month babies; and, more negatively, *Diseases of Women 1* notes the problems that can arise if the “navel-cutter” (*omphalêtomos*, a feminine noun also translated as “midwife”) acts prematurely, severing the umbilical cord before the afterbirth has all come out, also implying that such women were customarily present at deliveries.⁶²

Hippocratic doctors might be there too, however straightforwardly matters proceeded. The focus of their gynecological texts may be on difficult births, as well as various preceding (and subsequent) problems; but that is a function of genre, of the fact that these are basically treatises on *Diseases of Women*.⁶³ A clear understanding of normal, healthy, reproductive patterns is implicit in all this writing, against which the abnormal and pathological emerges; indeed the unproblematic norm is sometimes explicitly described.⁶⁴ There is no sense here that the birth chamber is someone else’s domain, however smoothly events are unfolding within it, no sense that this is not a proper place for a Hippocratic physician, that they lack authority or practical expertise in any of these areas. Though that is not to say they were commonly present at the most uncomplicated of deliveries, or were generally consulted about fertility before it became reproductive failure; but that they always could be. There was no principle preventing them. Similarly, there was no rule stopping women discussing reproductive problems and their illnesses with midwives, or their female

60. Thus, e.g., the veiling of Greek women: Lloyd Llewellyn-Jones, *Aphrodite’s Tortoise: The Veiled Woman of Ancient Greece* (Swansea: Classical Press of Wales, 2003). The closest to a murmur is at *Mul. 1* 62 (8 126.4–20 L), but it is rather differently directed.

61. Ar. *Lys.* 746; Pl. *Theat.* esp. 149b-d and 157c-d; discussed by King, *Hippocrates’ Woman* (n. 27), 172–87.

62. Hp. *Carn.* 19.3 (164.7–9 Potter [P. Potter, ed. and trans., *Hippocrates*, vol. 8 (Cambridge, Mass.: Harvard University Press, 1995)]); *Mul. 1* 46 (8 106.7 L); cf. *Superf.* 8 and Arist. *HA* 9.10 (587a9–24). For further discussion, see Ann E. Hanson, “Phaenarete: Mother and Maia,” in *Hippokratische Medizin und Antike Philosophie*, ed. Renate Wittern and Pierre Pellegrin (Hildesheim: Olms-Weidmann, 1996), 159–81.

63. They might have female assistance at a difficult birth too, e.g., Hp. *Mul. 1* 68 (8 144.22–4 L).

64. Hp. *Mul. 1* 34 (8 78.11–80.3 L).

friends, more generally. Indeed, the best guess must be that they did, and that various forms of treatment will have occurred in this context, though positive evidence is absent. There may have been a customary division of labor between, and certain more professional expectations around, normal and pathological situations, but no more (or less).⁶⁵

Finally, the question is, of course, how much of this is new? Were physicians in the Greek world involved in the care and cure of reproductive women, including providing infertility treatments, before they began to write about it, or, at least, write about it in the ways that have survived? Perhaps; and there are various remedies for women “who do not bear” in earlier Babylonian medical texts, though “medicine” is a somewhat complex and contested category in the Mesopotamian context, as can be illustrated by the therapeutic array found in these treatises, of incantations, amulets, herbs, and pessaries.⁶⁶ Still, regardless of these prior indications of medical interest in, and activity around, procreative failure, it has to be said that all the signs are that something rather different is being enacted and described in the writings of the Hippocratic Corpus. Infertility here explicitly emerges as a (usually) reversible physical condition, in a pretty systematic way: as a somatic problem that doctors confidently claim to be able to explain and cure, according to the same principles as other diseases. In so doing they may have extended their reach into traditionally female territory, the realm of the midwife; or, at least, this may have been part of a broader consolidation of their gynecological hold, integrated into a more defined and unified medical domain. Not that the *maia* was evicted from the birth chamber, or various neighboring areas of expertise and activity, but that she now had to share. Other claims to authority in respect to fertility and reproduction had been lodged, and gained purchase.

Infertility and Divinity

The forms and locations of divine assistance offered to the reproductively challenged also shifted over the classical period. Most important, here, the

65. See discussion in Lesley Dean-Jones, *Women's Bodies in Classical Greek Science* (Oxford: Oxford University Press, 1994), 211–15; Ann E. Hanson, “A Division of Labor: Roles for Men and Women in Greek and Roman Births,” *Thamyris* 1 (1994), 157–202; and King, *Hippocrates' Woman* (n. 27), 179–80.

66. See Marten Stol, *Birth in Babylonia and the Bible: Its Mediterranean Setting* (Groningen: Styx, 2000), 33–37 and 52–54 for infertility remedies; and, e.g., Markham J. Geller, *Ancient Babylonian Medicine: Theory and Practice* (Chichester: Wiley-Blackwell, 2010), 8–10 and 161–67, for debates about “magic” and “medicine” in ancient Babylonia.

rise of Hippocratic medicine gave impetus and identity to specialist healing cult. This increasingly coalesced around the central figure of Asclepius—the divine physician—and then expanded across the Greek world, most impressively in the fourth century BC.⁶⁷ Other options remained available, however, at a range of local and pan-Hellenic sites: more generic and gendered approaches to divinity about children were always possible.

Thus, the famous oracle of Zeus (and Dione) at Dodona in Epirus was often consulted about children, as well as marriage, travel, health, career issues, and many other aspects of life, throughout the fifth and fourth centuries BC (and beyond); as the hundreds of surviving enquiries, written on durable lead tablets, demonstrate.⁶⁸ “Will there be children for me?” they ask, often with a supplementary request for advice about which deities the questioners should align themselves with to ensure a positive outcome.⁶⁹ Sometimes the, largely male, consultants enquire about the reproductive prospects of a particular woman: Callicrates, for example, asks the god “whether there will be offspring for me from Nike, the wife he has, if he shows allegiance and prays to which of the gods?”⁷⁰ While the mid-fourth-century BC temple inventories from the sanctuary of Artemis Brauronia at Athens record a rich array of dedications: mainly of textiles and garments, and mainly by women.⁷¹ The lists do not include the reasons for the offerings, but Artemis was a goddess often involved with aspects of the female life cycle, and key rituals at Brauron itself were certainly associated with young women as they approached marriage and childbearing.⁷² A later epigram dramatizes this transition with a reference to an item of girl’s clothing dedicated to Artemis, “for both a husband and children.”⁷³

67. See Jürgen W. Riethmüller, *Asklepios: Heiligtümer und Kulte*, 2 vols. (Heidelberg: Verlag Archäologie und Geschichte, 2005), for the process of consolidation and expansion, as well as an exhaustive catalogue of sites; for a clear summary, see, e.g., Bronwen L. Wickkiser, *Asklepios, Medicine and the Politics of Healing in Fifth-Century Greece* (Baltimore: Johns Hopkins University Press, 2008), esp. 35–41.

68. Though the literary sources give the sanctuary to Zeus alone, the tablets almost all address themselves to gods plural, usually named as Zeus Naos and his consort Dione. About 1400 tablets have been discovered so far, though the vast majority remain unpublished; they date from the sixth century to the second century BC. See Esther Eidinow, *Oracles, Curses, and Risk among the Ancient Greeks* (Oxford: Oxford University Press, 2009) for general discussion of the oracle and a catalogue of all the published questions.

69. *Ibid.*, 87–93.

70. *Ibid.*, 91 no. 6: ἡ ἔσται μοι γενεὰ ἀπὸ τᾶς Νίκης τῆς γυναικὸς ἧς ἔχει συμμένοντι καὶ τίνι [θ]εῶν εὐχομένῳ; 92 no. 15 is definitely from a woman, and a few others are unclear.

71. See Tullia Linders, *Studies in the Treasury Records of Artemis Brauronia found in Athens* (Stockholm: Svenska Institutet i Athen, 1972). As well as some dedications without named dedicants, there is one from a man.

72. King, *Hippocrates’ Woman* (n. 27), 85–86.

73. *The Greek Anthology* 6.276 (Antipater): γάμος θ’ ἅμα καὶ γένος.

Despite the differences between the two cases, between a site where reproduction was considered one of the general aspects of life which the gods took an interest in and one in which reproduction features as part of the female life cycle, between mainly male consultants and almost entirely female dedicants, between a divine couple and a goddess, a pan-Hellenic sanctuary and a local shrine, they also share certain elements. Crucially, here, both are marked by indeterminacy, by an openness about the precise procreative situation in which the divine is being engaged. This is perhaps most obvious in respect to Artemis. Offerings might be made to her, not just as part of the movement from girl to woman, working toward marriage and motherhood, but also in thanks for successful childbirth (or the reverse), for more general assistance in labor, or the health and well-being of children just delivered.⁷⁴ There is no actual infertility here, then, rather a broadly pronatalist trajectory, one in which more specific problems might, presumably, be raised, but they are not the focus. And, while the questions at Dodona are clearer in their desire for future children, it is less certain whether this is in the context of real anxiety and failure, or part of a more routine buildup to generation, or somewhere in between.⁷⁵ Addressing the gods, requesting divine help and guidance, makes sense in all these scenarios, all may be encompassed within an oracular exchange. An exchange in which, though few actual answers survive, the guess would be that most would name some deities to supplicate, and thus, implicitly, provide a positive response.

If the situations in which divine engagement is sought are somewhat vague in these cases, then so are their causes. Certainly there is no indication that gods are being propitiated, that these appeals to divinity are responses to something of a particularly supernatural character. Indeed, the once standard curse/blessing formula that attached to Greek corporate oaths, and included barrenness or fecundity (usually of land or crops), and women bringing forth monsters or appropriate offspring, within the matrix of divine punishment or reward, had largely fallen out of use by the end of the fifth century BC; along with various other notions of deities doing direct harm to humans.⁷⁶ Such retribution remained

74. The goddess Eileithyia also has a focus on childbirth within a wider reproductive remit, see Semeli Pingiatoglou, *Eileithyia* (Würzburg: Königshausen & Neumann, 1981).

75. Two more specifically childless couples consult the oracle of Apollo at Delphi in Attic tragedy: Euripides, *Ion* 304–6, and *Phoenician Women* 13–16.

76. Christopher A. Faraone, "Curses and blessings in ancient Greek oaths," *J.Near Eastern Religions* 5 (2005), 139–56, here 144–45. On the wider process (in which the Hippocratics are certainly implicated) see, from a religious angle, e.g., Dale B. Martin, *Inventing Superstition: From the Hippocratics to the Christians* (Cambridge, Mass.: Harvard University Press, 2004), esp. 21–78; and, more corporeally, Brooke Holmes, *The Symptom and the Subject: The Emergence of the Physical Body in Ancient Greece* (Princeton: Princeton University Press, 2010).

imaginatively possible; but these types of explanation are never explicitly entertained, or even implicitly alluded to, in any more concrete circumstances. Outside of medical and philosophical texts, in fact, etiologies of reproductive failure are rarely discussed, or even mentioned; this is a problem that needs a solution not explication.

Asclepius certainly offers solutions. His solutions come closer to focusing on infertility than the other religious options discussed so far, as perhaps befits a specialist healing deity; but they also exceed that medical model in interesting ways. The richest evidence for all this is contained in the inscribed accounts of various cures (*iamata* in the Greek) accomplished by the god in, or in some sense associated with, his major sanctuary at Epidaurus in southern Greece. As part of a major building program, and wider refurbishment of the site in the mid-fourth century BC, a number of large stone stelae were erected to display a series of more or less elaborate stories of divine healings.⁷⁷ The number of such slabs publically visible in the classical period is uncertain: the later travel-writer Pausanias, describing his journey around Greece in the second century AD, says he saw six, but that there had once been more.⁷⁸ In the late nineteenth and early twentieth centuries, fragments of four stelae were recovered, three of which can be reconstructed reasonably completely, though not always legibly, with only a small piece remaining from the last; and they contain traces of about seventy curative tales, fifty of which can be read roughly in full.⁷⁹

The Epidaurian series of *iamata* present themselves as a collection of single epigraphic celebrations of individual cures, originally put up as such, and then gathered together to honor and praise the gods, encourage and instruct supplicants.⁸⁰ The majority of the stories thus follow a simple pattern, as also noted by Pausanias. Inscribed on the stelae are “the names of both the men and women who have been cured by Asclepius, the disease (*nosema*) which each suffered from, and the means of healing.”⁸¹ The means usually involve sleeping in the *abaton* (the sanctuary building designated for this purpose), and seeing a dream in which the god appears and interacts with the suppliant in some way, from which health results. Variations, and elaborations, on the main theme may then occur,

77. See Milena Melfi, *I Santuari di Asclepio in Grecia*, vol. 1 (Rome: “L’Erma” di Bretschneider, 2007), 17–209, for detailed analysis of the building phases at Epidaurus.

78. Paus. 2.27.3.

79. See the account in Lynn R. LiDonnici, *The Epidaurian Miracle Inscriptions: Text, Translation, and Commentary* (Atlanta: Scholars Press, 1995), 15–19.

80. Ibid., esp. 40–82, for discussion of this presentation, and more general issues of interpretation; and see also Matthew Dillon, “The Didactic Nature of the Epidaurian *Iamata*,” *Zeitschrift für Papyrologie und Epigraphik* 101 (1994): 239–60.

81. Paus. 2.27.3: καὶ ἀνδρῶν καὶ γυναικῶν ἐστὶν ὀνόματα ἀκεσθέντων ὑπὸ τοῦ Ἀσκληπιοῦ, προσέτι δὲ καὶ νόσημα ὃ τι ἕκαστος ἐνόσησε καὶ ὅπως ἰάθη.

but a case that illustrates the basic structure is that of Gorgias: “Gorgias of Heracleia, pus. This man was wounded in the lung by an arrow in some battle, and for a year and six months was festering so badly that he filled sixty-seven bowls with pus. When he was sleeping here, he saw a vision. It seemed to him the god drew out the barb from his lung. When day came he left well, carrying the barb in his hands.”⁸² The kinds of variability involved can be indicated by the tale of a Spartan woman—Arata—who suffers from dropsy. The cause is not specified, but to compensate for the lack of either etiological or symptomatic drama, it is her mother who makes the trip to Epidaurus on her behalf, rather than Arata attending in person. In her mother’s dream, “It seems to her the god cut the head off her daughter and hung the body neck downwards. After much fluid had run out, he untied the body and put the head back on the neck.”⁸³ Whereupon she returned to Lacedaimonia and discovered that her daughter was now healthy, and had seen the same dream.

The story of Arata can also be used to demonstrate the essentially Hippocratic structure of Asclepius’s cures. Two other tales further underline the parallels. The first is that of the anonymous suppliant so blind in one eye that he actually had no eyeball, who dreamed that the god poured a drug (*pharmakon*) he had concocted into the empty eye socket, and when day came “he left with both eyes.”⁸⁴ The second is that of the man from Torone who had swallowed leeches and who saw, in his dream, the god cut open his chest, take out the leeches and hand them to him, before sewing him back up again, so he too left well, carrying the leeches.⁸⁵ In each case, Asclepius might be described as adopting a basically Hippocratic approach to cure, just without the limitations of a mortal physician. He employs medicaments and surgery, but beyond the boundaries of the human. He is aware that dropsy is a disease of excess fluid, which needs to be removed, and adopts the most direct means to do so. Drawing, not just on these practical affinities, but also the more professional links expressed in the evocation of Asclepius as a divine patron of the medical art and its practitioners; recent scholarship has increasingly stressed that the relationship between his cult and the wider reshaping of the healing land-

82. B10 (LiDonnici): Γοργίας Ἡρακλειώτας πύος. οὗτος ἐμ μάχαι τινὶ τρωθεὶς εἰς τὸμ πλεῦμονα τοξε[ύ]μ[α]τι ἐνιαυτὸν καὶ ἐξάμηνον ἔμπυος ἥς οὕτω σφοδρῶς, ὥστε ἐπτά καὶ ἐξήκοντα λεκάνας ἐνέπλησε πύους· ὥς δ’ ἐνεκάθυεδε, ὄσιν εἶδε· ἐδόκει οἱ ὁ θεὸς τὰν ἀκίδα ἐξελεῖν ἐκ τοῦ πλεῦμονος· ἀμέρας δὲ γενομένης ὕγιης ἐξῆλθε τὰν ἀκίδα ἐν ταῖς χερσὶ φέρων.

83. B1 (LiDonnici): ἐδόκει τὰς θυγατρὸς οὐ τὸν θεὸν ἀποταμόντα τὰν κ[ε]φαλὰν τὸ σῶμα κρᾶσαι κάτω τὸν τράχαλον ἔχον· ὥς δ’ ἐξερρῶα συχὸν ὑγρ[ό]ν, καταλύσαντα τὸ σῶμα τὰν κεφαλὰν πάλιν ἐπιθέμεν ἐπὶ τὸν αὐχένα.

84. A9 (LiDonnici): βλέπων ἀμφοῖν ἐξῆλθε.

85. A13 (continuing to use LiDonnici’s numbering).

scape of classical Greece was essentially complementary, if not collusive.⁸⁶ Certainly, in contrast to the rejection of direct divine causation of disease, Hippocratic texts never oppose the idea that the gods can cure sickness.⁸⁷

The five women who are recorded as visiting the sanctuary for procreative reasons seem to both fit into, and stand out from, the patterns described so far. Again, one example can stand for the group: “Andromache from Epirus, concerning children. When she was sleeping here she saw a dream. It seemed to her that a handsome young boy uncovered her, and that the god touched her with his hand. From this a son was born to Andromache by Arybbas.”⁸⁸ Though the basic formula seems to have been followed in the narrative, the first difference occurs in respect to what has brought Andromache all the way from Epirus. Where Gorgias had “pus,” and Arata, “dropsy,” for example, she comes “about children” (*peri paidôn*), a phrase that recurs, with a couple of variations for all five.⁸⁹ Children seem more positive and prospective, less directly somatic, than the pathological norm; though there are other deviations around too, and it could be said that approaching Asclepius is always about a better future.⁹⁰ The weakened physicality surrounding fertility is also emphasized on the curative side, however. The touch of, or conversation with, the god is sufficient to ensure progeny in most cases, including the touch of his snake.⁹¹ The exception is Nikasiboula of Messene, who dreamed she had intercourse with the god’s snake, and produced twin boys within a year.⁹² The point is underlined through this production: these women do not “walk out well,” but subsequently bring forth children—boys and girls,

86. See Wickkiser, *Asklepios* (n. 67), 53–57 and 42–61.

87. Though *Diseases of Young Girls* (37–41, Flemming and Hanson) comes close, objecting to offerings to Artemis by those recovering from this affliction, when the cause of their release is purely physical; but this seems an interesting specific case, not a general principle: R. Flemming and A. Ellis Hanson, “Hippocrates’ *Peri Partheniôn* (*Diseases of Young Girls*): Text and Translation,” *Early Sci. & Med.* 3 (1998): 241–52. Indeed, *Regimen* occasionally recommends praying as part of a preventative package (e.g., *Vict.* 4. 89 and 90: 224.25–7 and 228.2 Joly).

88. B11 (LiDonnici): Ἀνδρομάχα ἐξ Ἀπείρο[υ] περὶ παίδων. αὐτὰ ἐγκαθεύδουσα ἐνύπνιον εἶδε· ἐδόκει αὐτᾷ π[α]ῖς τις ὥραϊος ἀγκαλῦσαι, μετὰ δὲ τοῦτο τὸν θεὸν ἀψασθαί οὐ τᾷ [χη]ρί· ἐκ δὲ τούτου τᾷ Ἀνδρομάχῃ υἱ[ι]ὸς ἐξ Ἀρύββα ἐγένετο.

89. B19 and 22: also *peri paidôn*; B14: *hyper teknon*; A2: *hyper geneas* (“on account of children/offspring”).

90. B4 and C3, for example, are not medical at all, but about help in finding a lost son and buried treasure, respectively.

91. A2 and B14: conversation; B 1 and B19: touch of god/snake.

92. B22.

singly and multiply.⁹³ There is one instance of a woman rushing out of the *abaton* to give birth immediately, but Ithmonike of Pellene had been pregnant for three years by this point, which was her second visit to the sanctuary, as the god had chosen to separate conception and birth in her case.⁹⁴

None of this seems very Hippocratic, either in terms of general approach or more specific content, though the alternative label, “supernatural” also seems inappropriate.⁹⁵ These are divine cures across the board, with the contrast mainly between vagueness and definition in relation to the imagined, or dreamed, mechanisms involved; not the essential character of the event. Even Nikasiboula leaves things somewhat open in these terms. Though issues of paternity are raised here, just as they are avoided in most of the other accounts, and actively denied by Andromache; it is not at all clear that sex with Asclepius’s snake is meant to be anything more than the proximate cause, broadly enabling, of her having twins.⁹⁶ There is a gesture toward mechanism here, but more on the model of the gourd, the phallic vegetables, than divine parenting. Which does put Asclepius in touch with Hippocrates: perhaps as both subject to the same cultural forces, despite themselves.

The main point may be a rather different one, however. Asclepius’s divinity may be operating in a more particular way here, as it oversteps, or elides, boundaries more broadly. What it offers, quite precisely, but also in a wide embrace, is a genuine response to those who come “about children”: an ability to realize a thwarted desire for offspring, regardless of what has prevented its fulfillment so far, irrespective of what the problem is. Somatic dysfunction may be implicated, or not, there may have been previous births, or not, the wish may be for a son, or a daughter, or unspecified offspring; it does not matter, the god can cope. Which is, of course, to say that Asclepius dissolves modern difficulties of classification;

93. In A2 the (eventually) realized request is for a girl; B11 and B22 produce boys without a specific request; B14 seems to record a fragmentary discussion with the god which includes the sex of the child, and a boy is the result; the sex of the five children in B19 is left open.

94. A2: indeed she has to rush out of the sanctuary all together, because neither birth nor death is allowed within its boundary. As one of the opening sequence of stories this one has a more substantial didactic content than most of those later.

95. Wickkiser, *Asklepios* (n. 67), 49n21.

96. Rudolph Herzog, *Die Wunderheilungen von Epidaurus: Ein Beitrag zur Geschichte der Medizin und der Religion* (Leipzig: Dieterich, 1931), 73–74 identified this Arybbas with a fourth-century BC king of the Molossians (in Epirus) of the same name; though the only wife recorded for him was called Troas, so this seems rather forced. Still, Epirus is a long way from Epidaurus, so a serious investment was involved here, and clearly included paternity. This was, of course, a world in which notions of divine paternity were not entirely unattractive.

or, perhaps better, prevents them from arising in the first place.⁹⁷ The category of supplicant holds together the ill, injured, and infertile, with room to spare: the deity can intervene in all bodies that present themselves to him in an appropriate fashion. His particular domain is physical health, but as an intrinsic part of general human flourishing; and reproductive failure is definitely harmful, whether or not actual disease is in the picture.

Though it is so clearly exceeded here, the strength of the medical model of reproductive failure in the classical Greek world is also definitely on display. It leads the infertile to a healing god in the first place, and it is one of the reasons it is women who sleep in the *abaton* “on account of offspring.” Asclepius is almost always presented as interacting with a named individual in the *iamata*, usually directly, occasionally by proxy, as in the case of Arata, or in otherwise more complex situations. Still, it is unlikely that the decisions behind the individual encounter commemorated are taken in isolation, and, indeed, families may have made the journey to a place like Epidaurus together. Arybbas, for instance, must at least have been involved in, if not the driving force behind, the determination to travel south from Epirus; but it is Andromache who presents herself to the god, her body is the focus of attention, the locus of “the drama of infertility” that is played out here.⁹⁸

Before leaving this summary of the divine reinforcements provided to mortal physicians in their treatment of infertility, the divine support offered not just to doctors, but also midwives, and indeed human beings more generally; some further attention must be focused on the evidence used, in particular the *iamata*. Because it could be objected that they have been read too literally, taken more or less as they present themselves, as the collected record of actual cures, of named individuals; selected and ordered by those who controlled the sanctuaries in question, but no more, whereas it is, surely, more likely that substantial reworking was involved, if not something more like the original composition of these, frankly unbelievable, tales.⁹⁹ While some more extensive rewriting is certainly a plausible part of the compilation of the inscribed series as it stands, a wholly cynical approach is more problematic. For these texts were on public

97. In part, because less is at stake in these categorizations in the ancient world: in terms of the allocation of resources and authority.

98. As modern studies of infertility emphasize, regardless of which partner has the “problem,” it is the woman who fails to become pregnant, and who will be the focus of most treatments; see, e.g., Arthur L. Greil, “Infertile Bodies: Medicalization, Metaphor and Agency,” in Inhorn and van Balen, *Infertility around the Globe* (n. 2), 101–18.

99. In the classical Greek world most sanctuaries belonged to the local city, and fell under their governance; they usually had priests attached to them, also within a civic framework.

display in these places; sites that were popular and successful over centuries. Epidaurus, in particular, drew suppliants from right across Greece, but even local healing sanctuaries were known about more widely, had their own myths and narratives, had effective reputations.

So, though they should certainly not be interpreted as case notes, as necessarily having a direct relationship to actual events in the sanctuaries; the *iamata* cannot be removed from their real workings either. If the accounts were at odds with the understandings of health and disease, humanity and divinity, which people brought with them to places like Epidaurus, or at odds with their real experiences at the site, then they would not have lasted; and, if supplicants had not gained tangible benefits from their visits, then they would have stopped coming. There must, of course, have been failures, as well as all the recorded (and unrecorded) successes, and what exactly went on in these locations remains uncertain in some respects; however the basic points are pretty secure. Asclepius was routinely approached “about children,” just as he was approached for the cure of a range of illnesses and injuries. He, and his snake, appeared in the dreams of women sleeping in the *abaton* for this purpose, and this encounter with the divine was understood to have enabled, in an open-ended way, any subsequent production of children.¹⁰⁰ This intervention demanded that the beneficent power of the god be gratefully commemorated.

This divine approach was the most specialist within a wider field, the wider fields, of the recourse to divinity. The target of real reproductive failure is brought into focus by the figure of Asclepius as healing god, by the illness and injury of other suppliants, and by their recorded cures (*iamata*) themselves. A specificity that stands in some contrast to both the generic scope of deities like Zeus and Dione at Dodona, or Apollo at Delphi, with their interest in all aspects of human existence; and the gendered purview of goddesses such as Artemis and Eileithyia, in which generation forms an important part of the female life course. Either what might be called the cultural or social construal of reproduction, or its construction as women’s business, could encompass infertility within its remit, but in rather different ways. These options, with their distinct emphases and framings, all continue to be available across the classical period and beyond; and, indeed, they all rely on shared assumptions about the nature of divinity and the gods’ ability to intervene in the mortal domain, in human bodies in particular. The basic principles of divine action, divine assistance, are the same across the board.

100. Which means that, with the exception of the story of Ithmonika of Pellene (A2), the infertility cures do not have problems of unbelievability.

Conclusion

This article has had a dual purpose. It has aimed to explore, in depth and detail, the conceptualization of and practical responses to reproductive failure in the classical Greek world, and, in so doing, to show that, almost two and a half millennia before the birth of Baby Louise, procreative disruption, non-procreation despite regular intercourse, was already understood as a “medically and socially liminal state”: a position of compromised generative capacity, but not its absence. Hippocratic physicians were certainly optimistic about the possibilities of remedy, had an extensive therapeutic repertoire they could deploy in a range of situations; and, if they did not produce the right result, if incurability emerged from the healing endeavor, then there were gods who could be called on to resolve the problem. A divine physician, not subject to human limitations, or other divinity, might be approached: all could answer the desire for children, more children, healthy children, a boy or a girl; all could, and did, support a range of procreative projects. This flexibility and capaciousness might, indeed, mean that the divine would be the first port of call when reproductive plans were disrupted; whichever way around, however, “infertility” had certainly been invented.

While absolutely irreversible physical conditions (of any sort) and nonfictional divine curses have been hard to find in the classical Greek world, some of infertility’s modern ambiguities do have more of an ancient presence. Reproductive failure’s status as disease, rather than its consequence, or some looser form of somatic dysfunction has not been clearly established, but then the whole notion of disease, its medical definition, is under construction at this point, and rather flexible as a result. In addition, it is understood that it is the generative efforts of a partnership that are disrupted, that the infertility is in a sense shared, the case of non-procreation may subsist between a man and a woman. Changing partners is, therefore, sometimes suggested as an option; though the focus of more specific treatment—mortal or divine—is always the female body.¹⁰¹

Success was not guaranteed, of course, in either case. Divinity ensured possibility not result; doctors might be able to help, but could face defeat in the end. As is often stressed, however, there are still no guarantees: it is just that expectations have now become coterminous with, even exceed, the possible, rather than taking up the rather smaller space they once occupied.¹⁰² In antiquity, like today, there were a number of options worth

101. Suggested at, e.g., Arist. *GA* 747124–6.

102. Thus, even in the most favorable situations today, ART success rates rarely reach 50 percent, and (for certain techniques and older women) may be as low as 10 percent for a

pursuing, which operated within a recognized framework of understanding and appropriate action. All had costs attached to them—social and financial costs, of time and energy, of bodily comfort and health—but to different extents and degrees, and unequally shared between partners. If childlessness persisted, then Greek law provided men with some further choices: to divorce and remarry, and, eventually to adopt. Adoption it should be said, however, is almost always about heirs, not children as such: most adoptees are adults, and they may be adopted by will, as well as during the adopter's lifetime.¹⁰³

The particularities of ancient Greek adoption serve to underline that, despite the argument made here for certain strands of historical continuity in relation to the understandings of, and responses to, infertility, the emphasis on connections and congruities over time and space; there are important differences too. There are divergences in the social and legal framing of generative issues, in institutional and professional development, for instance, not to mention changing levels of infant mortality, and life expectancy, divergent demographic regimes, more generally. The main point, however, is that for this story to be properly told, it must be recognized that infertility has a history that goes back thousands of years, a rich and varied history, but which always involved medical efforts among others, and never lacked confidence, a confidence that, itself, will have helped achieve positive results.¹⁰⁴ This will come as much less of a surprise to those working in premodern periods than to those with a more modern, or late modern, focus. Still, everybody stands to gain from a more joined up field. Studies of both particular times and places and larger scale projects will benefit, as commonalities and specificities, contrasts and connection, dramatic change and slight modulation all emerge more clearly.



REBECCA FLEMMING is senior lecturer in ancient history in the Faculty of Classics, and fellow of Jesus College, University of Cambridge. She has published widely on medicine and gender in the ancient world, both jointly and separately.

single treatment cycle. See the national statistics published, e.g., by the *Human Fertilisation and Embryology Authority* for the United Kingdom (<http://www.hfea.gov.uk/>) and the *Society for Assisted Reproductive Technology* (<http://www.sart.org/>) in the United States.

103. See Lene Rubinstein, *Adoption in IV. Century Athens* (Copenhagen: Museum Tusculanum Press, 1993) for full discussion.

104. Just as infertility is a real issue across the globe today, in particular ways and forms, depending on the specific contingencies at play, and is not just a matter for the developed world: see, again, Inhorn and van Balen, *Infertility around the Globe* (n. 2), esp. 3–32.