DORIS POST PRIZE ESSAY 2024
Reproduction, Expansionism and the Nature–God Tension in Herodotus[1]

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ABSTRACT: Focusing on Herodotus' portrayal of snake invasions and Persian expansionism, this essay examines the divergent forms of agency and causation through which the natural and the divine act on the observable world in the *Histories*. The historian's usage of *physis* at 3.109.1 shows that the divine counters the natural dispositions of mortals who attempt to maximize their territorial growth. This counteraction has implications for power relations and provides a new way to conceptualize the relationship between ethnographic and historical sections in the work. The snake invasions and the dynamics of Persian expansion, as Herodotus envisions them across the *Histories*, prompt images of density and spatial expansion, evoking the tension between the natural and the divine orders over reproduction in 3.108–9.

KEYWORDS: Herodotus, reproduction, animal diversity, territorial power, divine intervention

One of Herodotus' best-known statements on divine action is found in his account of the winged snakes of Arabia (3.108.2):[2]

> καί κως τοῦ θείου ἡ προνοίη, ὥσπερ καὶ οἰκός ἐστι, <φαίνεται> ἐοῦσα σοφή. ὅσα μὲν γὰρ ψυχήν τε δειλὰ καὶ ἐδώδιμα, ταῦτα μὲν πάντα πολύγονα πεποίηκε, ἵνα μὴ ἐπιλίπῃ κατεσθιόμενα, ὅσα δὲ σχέτλια καὶ ἀνιηρά, ὀλιγόγονα.
>
> And somehow divine providence, as is reasonable, <appears> clever. For it has all the edible beings with fearful spirits reproduce a lot, lest they go extinct by being eaten. By contrast, it has the *fierce* and noxious reproduce little.

As envisioned by Herodotus, divine foresight affects reproduction just as Hesiod's Zeus surveils *hybris* and '*fierce* deeds' (σχέτλια ἔργα, *Op.* 238).[3] For Hesiod, 'through Zeus's contrivances, women do not give birth and households decrease' (οὐδὲ γυναῖκες τίκτουσιν, μινύθουσι δὲ οἶκοι | Ζηνὸς φραδμοσύνῃσιν, 244–5).[4] Unlike the

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[2] I quote and translate Herodotus from Wilson's 2015 edition. For other authors I base my translations on the latest Loeb.

[3] Herodotus' frequent use of 'god' (θεός) as a singular noun, and his references to 'divinity' (θεῖον) are not monotheistic, but mark either particular gods or divinity in general. See Harrison 2000: 171–5; Asheri in Asheri et al. 2007: 102.

[4] Demont 2022: 59 offers another Hesiodic comparison with Hdt. 3.108–9.

other passages in the *Histories* that parallel Hesiod's example, the winged snake episode situates *physis* as a potential force repressed by the divine.[5] We learn that, because of divine foresight, vipers and winged snakes do not 'reproduce according to their nature' (ἐγίνοντο ὡς ἡ φύσις αὐτοῖσι ὑπάρχει, 3.109.1). Here the 'catchword' *physis*, by which Herodotus means 'natural constitution', is grafted onto a conventional model of divine intervention.[6]

Scholars have taken Herodotus' statement on divine foresight, and the analysis of animal reproduction that follows (3.108.3–109.3), as proof that he saw balance in the universe.[7] This emphasis on balance has obscured the underlying opposition between the natural and the divine.[8] Henry Immerwahr holds that for Herodotus gods are 'the guarantors of the workings of nature', thus implicitly ascribing a constructive role to *physis* and overlooking the disorder and excessive growth Herodotus attributes to it at 3.109.1.[9] Mary Zingross goes further by equating Herodotus' notion of the divine with the totality of nature.[10] Neither Immerwahr nor Zingross, however, examines the significance of *physis* in this passage, instead retrojecting modern notions of the 'natural world', which is not the sense in which Herodotus uses the term.[11] By contrast, recent approaches emphasize the alterity of the ancient ideas of nature.[12] One impact these approaches have had on Herodotean scholarship has been to foster an interest in how Herodotus frames certain boundaries as natural, and notably a reluctance to impose modern assumptions about what is natural on the *Histories*.[13]

Prioritizing Herodotus' usage of *physis*, this essay discusses the divergent forms of agency and causation through which nature and the divine act on the observable world in the *Histories*. It argues that the identification of the nature–god tension provides a new way to conceptualize the relationship between ethnographic and historical sections in the work. What would today be separated as historical, natural and theological statements are intimately connected in

[5] Hdt. 6.138–9 and 9.93 situate divine responses among the causes of fertility rates (6.137.3: *hybris*; 6.138.3: 'fierce deeds', σχέτλια ἔργα). Parallels outside Herodotus include Aesch. *Ag*. 129–50; Soph. *OT* 22–5, 171–3; and RO 88.39–46. Similar assumptions about divine action and reproduction underlie curses (*arai*) from later periods (Lamont 2023: 234–9).

[6] For *physis* in Herodotus, see now Kingsley 2024: 117–66. She offers (p. 123) that *physis* 'is best translated as "nature" or "natural constitution" in the *Histories*' and cites Kahn 1960: 201 for its 'catchword' quality (p. 117). For divine intervention, see Harrison 2000: chapters 2–5. Thomas 2000: 149 suggests that divine providence is Herodotus' 'own slant' on current debates.

[7] Pelling 2019: 18–21; Lateiner 1989: 194–6; Immerwahr 1966: 312–15; Pagel 1927.

[8] Demont (2022: 55; 2011: 75) and Kingsley (2024: 138) note the opposition without further exploration.

[9] Immerwahr 1966: 311.

[10] Zingross 1998: 182–91. Cf. Romm 2006: 182–6.

[11] Kingsley 2024: 127; Bosak-Schroeder 2020: 19–20; cf. Holmes 2017: xi. On the emergence of *physis*' holistic sense in fifth- and fourth-century BC texts, see Macé 2012; cf. Kingsley 2024: 127 n. 45.

[12] E.g. Schliephake 2020; Bianchi et al. 2019.

[13] This turn is exemplified in Bosak-Schroeder 2020: 53–6, who finds in Herodotus 'not the crossing of predetermined "natural" boundaries, but a demonstration of how those boundaries are made and can be remade by both humans and other beings' (p. 35). Examining 'the constructed landscape in Herodotus' work' from a narratological perspective, Clarke 2018: 42–3 also argues that Herodotus 'both upholds and blurs boundaries' through physical space.

Herodotus. The first section explores the nature–god tension over reproduction at 3.108–9 in terms of power relations. After showing that Herodotus' views on reproduction implicitly problematize the idea that 'might is right', I consider Artabanus' warnings in Book 7 as an example of the link between reproduction and (anti-)expansionism. Divine action is crucial to Herodotus' conception of this link. The second section analyses the images of density and spatial expansion in the parallels between Herodotus' references to snake invasions and the dynamics of Persian expansion. I survey the verbal echoes of 3.108–9 in spatial depictions of Persian armies. I detect further resonances in episodes of snake infestations at Sardis, Buto and Scythia, and assess divine interventions implicit in these episodes. Overall, it becomes clear that ethnographic and historical passages display a similar concern with linking reproduction to expansionism, a link that is reinforced by assumptions about natural constitutions and divine action. Herodotus' spatial triangulation of humans, animals and the divine is particularly resonant today, when humans leave little room for other species in the world.

Nature's oviparity versus god's sexual cannibalism

In Herodotus' famous comments on animal reproduction (3.108–9), divine foresight suppresses the numbers, and limits the spatial expansion, of 'fierce and noxious' animals (σχέτλια καὶ ἀνιηρά, 3.108.2). This act of restriction constitutes a permanent intervention in an underlying reality. The two fierce species he mentions do not reproduce in accordance with their nature (*physis*): 'it would be unliveable for humans if the vipers and the winged snakes in Arabia, *reproduced in accordance with their nature*' (αἱ ἔχιδναί τε καὶ οἱ ἐν Ἀραβίοισι ὑπόπτεροι ὄφιες εἰ ἐγίνοντο ὡς ἡ φύσις αὐτοῖσι ὑπάρχει, οὐκ ἂν ἦν βιώσιμα ἀνθρώποισι, 3.109.1). As the verb ὑπάρχω indicates, the counterfactual denotes an unrealized *physis*.[14] Divine foresight has not altered the nature of these snakes, which exists in an unrealized state; instead, it has introduced obstacles to counterbalance it, as we learn in the next sentence. This unrealized status highlights a permanent clash between *physis* and divinity in the curtailment of vipers and winged snakes. The divine always has the upper hand, but its occasional antagonism towards individual animal natures endures.[15] Even if all of Herodotus' allusions to the natural and the divine do not situate the two in conflict, at 3.108–9 he envisions them so. It is a conflict that revolves around reproduction and expansion.

Two assumptions inflect Herodotus' approach to the supposed link between the reproduction and expansion of animal groups. First is the idea that viviparity, namely the act of giving birth to live offspring, is a quantitatively inefficient reproduction type. Second is that oviparity, namely the act of laying eggs, will yield superior numbers. Herodotus takes viviparity as a behaviour that is against snake *physis*.[16]

[14] Thuc. 2.45 and Isoc. 7.76 use the phrase 'existing *physis*' (ὑπαρχούσης φύσεως) to designate the unrealized nature of women (hypothetically, in Thucydides) and the Athenians (factually, in Isocrates).

[15] In the Q&A of my Herodotus Helpline talk in November 2025, Paul Demont kindly reminded me that the two sides of this tension are not on an equal footing.

[16] For a comparison of oviparity and viviparity in snakes: Mattison 2007: 158–62. Vipers'

We infer this unnaturalness from his positioning of the fact of viviparity after the counterfactual on natural reproduction. If realized, the natural reproductive potential of winged snakes and vipers would culminate in them having absolute power *vis-à-vis* humans.[17] Humanity has not become extinct, however.[18] Herodotus lists three reproductive habits of the two snake groups as the reasons why this has not happened: viviparity, matriphagy and sexual cannibalism.[19] The counterfactual and these three behavioural facts exemplify his generalization on divine action quoted at the beginning of this essay. This exemplarity requires that the divine offsets the *physis* of vipers and winged snakes through somehow introducing sexual cannibalism, viviparity and matriphagy. It is because divine foresight partially restrains their reproductive nature that the females of these two groups eat their mates, give live birth instead of laying eggs, and are then eaten by their vengeful offspring (3.109.1–2). Herodotus' flexible conception of *physis* allows that, despite their partially unrealized *physis*, the two species retain other dispositions.[20] Divine foresight does not stop them from being 'fierce and noxious', for example. It overrides, but does not fully abolish, the underlying pattern of submissive/assertive properties by introducing new patterns.[21]

At 3.108–9, oviparity is supposedly the natural behaviour of snakes. This supposition is clear from Herodotus' juxtaposition of the counterfactual *physis* of the two snake groups with the factual oviparity of other snake species at 3.109.3.[22] All snakes apart from the two species that endanger humans 'lay eggs and hatch a great deal of their offspring' (3.109.3). The reproductive *physis* of all snake groups but two is realized. Divine measures offset the natural inclination towards oviparity only in vipers and winged snakes. 'Other snakes' thus provide a litmus test against the two that require divine intervention. They are oviparous and hence at least visibly prolific due to the sheer amount of young hatched in one go. That their

viviparity often takes the form of ovoviviparity (Mattison 2007: 160–1), that is, the act of giving live birth without placental attachment, where the yolk – not the placenta – nourishes the embryo, as in seahorses and tiger sharks. In antiquity, ovoviviparity was already observed by Pliny: 'the viper ... is the only land animal that lays eggs in itself' (*terrestrium eadem sola intra se parit ova*, *HN* 10.62).

17 Aesch. *Suppl.* 262–70 and Arist. [*Mir. ausc.*] 23 refer to an analogous situation.

18 A discourse-external 'now' with an accented νῦν (3.109.1–2) separates the reproductive facts from the counterfactual; cf. Bakker 2006: 97.

19 Sexual cannibalism is today known mostly from spiders and praying mantises. Female Lataste's vipers have been observed to eat male partners between laying eggs, not during copulation (Freiría et al. 2006). Future research may give Herodotus empirical support, because 'snakes appear to offer an underappreciated array of cannibalistic scenarios' (Maritz et al. 2019: 2). Matriphagy is observed among insects, not snakes.

20 Kingsley 2024: 136: 'in the *Histories*, *physis* encompasses the set of *possible* dispositions and physical attributes of its object' (my emphasis). Vlastos 1975: 19: 'Now from the fact that a given thing has a *physis* Herodotus would not allow us to infer that we will always see it in full possession of that *physis*.'

21 The natural and the divine elicit conflicting predictions at 3.108–9. Cf. Harrison 2000: 100: 'Whilst by definition [miracles] break the rules of ordinary expectations, ultimately they operate according to principles which are predictable.' See Munson 2001: 247.

22 At 3.109.1, How and Wells gloss 'φύσις: i.e. from eggs, according to the "nature" of serpents'. Aristotle too considers the snake genus as oviparous and prolific (*Gen. an.* 770a26), with the exception of vipers (732b22–3).

numbers do not need to be curtailed illustrates the principle laid out in 3.108.2, namely that the divine intervenes to prevent extinction. When extinction is not at stake, there is no need to intervene. For animal groups like the Theban two-horned snake, whose natural growth does not threaten humans, divine foresight does not introduce new behavioural patterns.[23] Since 'other snakes lay eggs', the prevalence of viviparity among vipers – a cornerstone of ancient etymologies – requires an explanation.[24] Herodotus finds it in the tension between the natural and the divine.[25]

Through reproductive patterns, the nature–god tension influences the control of space by different animal groups. This influence is clear in Herodotus' memorably excessive depiction of the unrealized population growth of the two snake species. He bases this depiction on Arab sources in 3.108.1: 'the whole earth *would be filled* with these snakes, the Arabs say' (λέγουσι δὲ καὶ τόδε Ἀράβιοι, ὡς πᾶσα ἂν γῆ ἐπίμπλατο τῶν ὀφίων τούτων), if divine foresight did not cause them to reproduce less than their natural disposition.[26] Snakes would fill up all available space, leaving no refuge for humans. Herodotus lends partial support to this counterfactual by asserting that he recognized their reproductive system from the example of vipers, which he 'knew' (ἠπιστάμην, 3.108.1), a system he then explains in his own words (3.109.1–2).[27] As discussed above, this system consists of viviparity, sexual cannibalism, and matriphagy. Thanks to these supposedly unnatural behaviours, the two snake species do not fill the earth. We will see in the next section that the images of density and the filling up of space at the expense of other entities are not exclusive to non-human animals, and resonate through cognates of πίμπλημι in Herodotus' depiction of Persian expansion.

Herodotus' linking of the reproduction of one group with the extinction of another conveys an implicit message against overgrowth. The normative question that underlies this link is whether a group should grow its numbers and territory unchecked at the expense of others, if naturally capable of doing so. Herodotus' treatment of human *physis* echoes this question more clearly than the passage on animal reproduction. As Scarlett Kingsley convincingly argues, his framing of human nature evokes 'a debate on empire much discussed among philosophers on the right of the stronger to rule, a philosophy underwritten by an appeal to *physis*'.[28] For Kingsley, Herodotus' involved use of *physis*, both testing and refuting its supremacy, cuts across the terms of the contemporary *physis–nomos* debate,

[23] The word 'noxious' (δηλήμονες) is repeated at Hdt. 2.74 and 3.109.2.

[24] On the etymology of *vipera*, see de Vaan 2008: 681; on that of ἔχις/ἔχιδνα, Bodson 2014: 563.

[25] Later explanations did not place the divine in direct interaction with *physis*. For Aristotle, it is the relative 'perfection of the *physis*' of viviparous animals (τελεώτερα τὴν φύσιν, *Gen. an.* 732b30; cf. Arist. *Div. somn.* 463b15) that explains viviparity. Pliny treats viviparity as a given but explains vipers' sexual cannibalism through female 'pleasure' (*voluptatis dulcedine*) and matriphagy through infantile impatience (*inpatientes*, *HN* 10.170).

[26] The point holds even if we translate πᾶσα γῆ as 'all Arabia' as Godley does in his Loeb. When specifying the land of Arabia with a noun, Herodotus uses only χώρη (2.11.1, 3.107.1, 3.113.1), except in reference to its soil (γῆν, 2.12.3). His explanation that 'winged snakes seem to be abundant in Arabia because they are found nowhere else' (3.109.3) supports the 'whole earth' translation of πᾶσα γῆ.

[27] On the reading ἠπιστάμην, Demont 2022: 50.

[28] Kingsley 2024: 161–5, quotation p. 161.

and innovates on the position, defended by various philosophers, that instruction and exercise are alternatives to the supremacy of *physis*.[29] She thus shows that Herodotus is concerned with the different manners of challenging the moral superiority attributed to *physis*. Read through this concern, the historian's framing of the divine in 3.108–9 implicitly undermines the idea that 'might is right'. Instead of countering *physis* with *nomos*, this passage posits divine foresight as a force that restrains the stronger from destroying the weaker entirely.[30] He thus alludes to naturally strong animals like Plato's Callicles would do, only to reach a different conclusion by bringing in the divine. In *Gorgias*, Callicles refers to lions bred in captivity to argue that human customs unjustly restrain those that are naturally strong.[31] For Callicles, '*physis* itself shows that the better justly has more than the worse, the stronger more than the weaker' (φύσις αὐτὴ ἀποφαίνει αὐτὸ ὅτι δίκαιόν ἐστιν, τὸν ἀμείνω τοῦ χείρονος πλέον ἔχειν καὶ τὸν δυνατώτερον τοῦ ἀδυνατωτέρου, 483d). At 3.108.4, by contrast, Herodotus' lions have less than they would naturally (as a group), not because they are in captivity, but because divine foresight is not letting them.[32]

By juxtaposing the natural with the divine in explaining why fierce animals lack numerical superiority, Herodotus problematizes the natural drive of stronger groups to dominate weaker ones.[33] In the power hierarchy assumed at 3.108–9, every group risks extinction at the hands of more powerful ones. Yet this pessimistic scenario does not materialize, as it would if the *physis* of the strong ruled supreme.[34] Stronger and weaker animals continue to coexist. It is not that lions do not frequently kill physically weaker animals. But the latter do not lose the fight in the grand scheme of things: what they lose in the battlefield, they win back in the bedroom, as it were. The divine moderates the natural dominance of strong mortals at the collective level without eliminating them at the individual level. A lion remains fiercer than a rabbit in single combat, but rabbits do not lose

[29] Kingsley 2024: 164–5 cites fragments of Epicharmus, Critias, Democritus and Protagoras.

[30] On the *physis*/*nomos* dichotomy in Herodotus, see Thomas 2000: 84, 124–5; Kingsley 2024: 86–7.

[31] Pl. *Grg*. 483e–484a: 'We shape those that are the best and strongest of us, catching them from a young age like [we do with] lions. Enchanting and bewitching, we make them our slaves, saying they must have an equal share' (πλάττοντες τοὺς βελτίστους καὶ ἐρρωμενεστάτους ἡμῶν αὐτῶν, ἐκ νέων λαμβάνοντες ὥσπερ λέοντας, κατεπᾴδοντές τε καὶ γοητεύοντες καταδουλούμεθα λέγοντες ὡς τὸ ἴσον χρὴ ἔχειν).

[32] Cf. Antisthenes' lion-rabbit pair (Arist. *Pol*. 1284a15): Dodds 1959: 269. Unlike Antisthenes, Callicles' allusion to lions works at the individual level. As with intergenerational retribution, Herodotus' view of divine intervention in reproduction de-emphasizes the individual.

[33] Aristotle is also interested in explaining why large animals are less numerous. According to him, the reason they reproduce less prolifically than small animals is to be explained within the framework of *physis*: *Gen. an*. 725a30–55, 760b21–8, 771a20–35.

[34] Hdt. 3.108 does not explicitly refer to the *physis* of rabbits and lions. But Herodotus' chiastic positioning and paradigmatic usage of their reproductive systems suggest that the divine counteracts their *physeis* too. Divine foresight boosts rabbits' birth rates against their viviparous nature (3.108.3) and curbs lion fertility against their superlative strength and boldness (3.108.4). On the paradigmatic usage in this passage, see Zingross 1998: 183. On the chiastic structure, see the Appendix below.

as a group and go extinct.[35] Underdogs occasionally defeat fiercer opponents in unexpected, supposedly unnatural ways.

The link between reproduction and expansion thus enables Herodotus to approach power relations through the competing forces of the divine and the natural. Power is relative and dynamic, as with the unstable magnitude of cities in his programmatic statement (1.5.3–4).[36] This dynamism is also present at 3.108–9. The nature–god tension does not result in equal numbers or powers. Humans are stronger than rabbits (3.108.3) but weaker than vipers and winged snakes (3.109.1). Divine concern with the continued existence of the weak alongside the strong is a principle that applies on a case-by-case basis. The use of πάντα at 3.108.2 indicates that the principle applies dynamically to *all* living beings. Divine foresight worries about humans *vis-à-vis* the two deadly snake species, but the principle is not anthropocentric, as it also applies to relations between rabbits and lions (and birds of prey, 3.108.3). Divine foresight protects rabbits against humans, and humans against certain snakes. The divine protection of the weak against extinction theoretically extends to human groups at risk of destruction by invasive forces. It also extends to the depletable resources like plants and rivers that sustain these human groups. The nature–god tension acquires partial explanatory power for why large armies are not always victorious, and do not always exhaust the resources of weaker groups. It joins the causes of human conflicts alongside human decisions and coincidences.[37] Herodotus' programmatic interest in the Persian Wars is not far removed from his views on animal reproduction.[38] We will pursue this connection through verbal echoes in the next section.

The natural and the divine implicitly interact in Herodotus' depiction of human conflicts, although he rarely situates *physis* as an explicit factor in these antagonisms.[39] In Artabanus' well-known warning in Book 7, divine jealousy counteracts the natural growth, human or not.[40] Herodotus' Artabanus does not explicitly mention *physis* but refers to a divine concern with natural growth as at 3.108–9.[41] Divine action explains why trees, animals and armies occasionally stop growing at the expense of others, while natural dispositions explain why

[35] The unequal (but symmetrical?) distribution of things across the earth (though more balanced at the centre, that is, in Greece: 1.142.1, 3.106.1) similarly prevents a single group from having too much power (1.32.8). See Pelling 2019: 86; Immerwahr 1966: 315–16; Pagel 1927: 31–2.

[36] Greenwood 2018.

[37] On the compatibility of divine and godless explanations in Herodotus: Romm 2006: 124; Harrison 2000: 92–7; Pelling 2019: 101–5; 1991: 139.

[38] Herodotus' ethnographic sections are better not taken as digressions from a main topic. Read through Bakker's stylistic analysis (2006: 94–5), the depictions of frankincense production and animal reproduction are only two of the short and long *logoi* that Herodotus integrates as 'disparate action strings into the ongoing progression of one single, heterogeneous, *logos*'.

[39] Hdt. 5.118.2 refers to *physis* in a hypothetical military conflict (Kingsley 2024: 142–4.)

[40] For the connection between divine jealousy and foresight in Herodotus, see e.g. Bowie 2012: 271–2.

[41] In another well-known passage, Artabanus likens Xerxes' decision to attack Greece to a turbulent sea that cannot 'enjoy its *physis*' (φύσι τῇ ἐωυτῆς χρᾶσθαι, 7.16a) because of winds. He presents marine *physis* and, by extension, Xerxes' *physis* as peaceful. Not every nature is a destructive force. Its positive or negative evaluation depends on what a given *physis* entails. Cf. Kingsley 2024: 87.

they were growing in the ways they did. Artabanus' jealous god 'hurls his bolts always at the greatest buildings and the tallest trees' (ἐς οἰκήματα τὰ μέγιστα αἰεὶ καὶ δένδρεα τὰ τοιαῦτα ἀποσκήπτει τὰ βέλεα), and curtails the 'powerful animals' (τὰ ὑπερέχοντα ζῷα, 7.10e).[42] As at 3.108–9, the problem is not growth itself, but the drive to maximize growth. The divine targets large armies in the same way it targets naturally growing trees and animals: 'even a large army is thus destroyed by a small army' (οὕτω δὲ καὶ στρατὸς πολλὸς ὑπὸ ὀλίγου διαφθείρεται, 7.10e).[43] If Xerxes 'thinks big' (φρονέειν μέγα, 7.10e) and is inclined towards world domination to become Zeus's neighbour (7.8c.1), chances are that the divine will foil him. The past shows that the weak sometimes beats the strong (7.18.2). Certain details in Herodotus' narrative echo Artabanus' generalization at 7.10e. A Scythian king's 'large and luxurious house' (οἰκίης μεγάλης καὶ πολυτελέος, 4.79.2) is struck by a thunderbolt.[44] Later, 'thunder and lightning bolts' (βρονταί τε καὶ πρηστῆρες, 7.42.2) kill soldiers in Xerxes' large army, and 'fear' (φόβος, 7.43.2) falls upon it as Artabanus prophesied.[45] Parts of Herodotus' depiction of Xerxes' Greek campaign, as we will see in the next section, fit the nature–god tension at 3.108–9. Paraphrasing Thomas Harrison's observation on Herodotus' belief in retribution, we can assert that the nature–god tension is part of 'an attitude of mind that has both shaped and been shaped by the events that Herodotus records'.[46] Besides its clear articulation at 3.108–9, this attitude is implicit in his references to invasive snakes and Persians, as I will now argue.

Snakes and Persians

In the *Histories*, the nature–god tension temporarily influences power relations beyond the permanent impact Herodotus attributes to it at 3.108–9. This temporary activity is implicit in the verbal echoes in descriptions of snake and Persian expansion. That the growth of the Persian realm parallels snake infestations will become clear from Herodotus' recurring usage of words denoting consumption and density (especially forms of πίμπλημι 'fill', ἐσθίω 'eat' and λείπω 'be missing'). Rosaria Munson describes this kind of parallelism thus: 'Similarities among different actions, their motives, and their outcomes may emerge from the recurrence of words and concepts within different contexts.'[47] In what follows, I examine the recurrence of density and consumption in parallel to 3.108–9. The portentous snake infestation at Sardis (1.78), Herodotus' passing comments on the space occupied by large armies in books 3 and 7, his representation of the Persian elite's views on expansionism and the snake invasions of Buto (2.75) and Scythia (4.105) contain verbal echoes of 3.108–9. The image of one group filling the earth

[42] Solon reminds Croesus, who has 'great wealth' (πλουτέειν μέγα, 1.32.5) and 'many men' (πολλῶν ... ἀνθρώπων), of the divine jealousy that 'destroys root and branch' (προρρίζους ἀνέτρεψε, 1.33.1).

[43] The divine equalizes the chances of military success: 6.109.5, 6.11.3, 8.13; cf. Hes. *Op.* 246.

[44] Cf. Thrasybulus imitating the divine (Hdt. 5.92f.2).

[45] Pelling 1991: 134–40; Harrison 2000: 99; Clarke 2018: 301.

[46] Harrison: 2000: 116.

[47] Munson 2001: 48. Not every verbal repetition proves intentional usage on Herodotus' part, as Dillery 2024 carefully distinguishes in the case of verbal pairings.

at the expense of others, vividly expressed in the counterfactual at 3.109.1, recurs in Herodotus' allusions to the growth of Persian power.

While it is certainly true that Herodotus' representation of the Persians is complex and not always negative,[48] his depiction of the dynamics of Persian expansion displays remarkable parallels with that of the growth of snake populations. This parallelism between dangerous snakes and the imperialist human group of the time *par excellence* has gone mostly unnoticed.[49] Attention has been given instead to the anthropomorphic qualities of Herodotus' winged snakes.[50] For example, they 'protect' (φυλάσσουσι, 3.107.2) frankincense trees. Greeks commonly saw snakes as guards, perhaps most famously exemplified in the protector of the Golden Fleece.[51] The Orestian vengeance of the baby snakes upon their mothers is also anthropomorphic ('the female pays such a penalty to the male: ... the children take revenge', ἡ δὲ θήλεα τίσιν τοιήνδε ἀποτίνει τῷ ἔρσενι ... τιμωρέοντα ... τὰ τέκνα, 3.109.2).[52] In Fiona Mitchell's words, 'they behave in a manner that reflects some sort of justice'.[53] This vengeful behaviour is not unique to Herodotus, as seen in the iconographic and literary evidence that associates snakes with the vengeful Erinyes.[54] Within this larger group of ideas about snakes, it makes sense that a winged snake is 'both a protector and avenger' like the River Scamander in Book 21 of the *Iliad*.[55] These two features are not exclusive to invasive snakes.

The motif of excessive territorial growth is specifically common to portrayals of dangerous snakes and Persians. That this excessive dimension is not a permanent group characteristic of Persians is clear from the oracular snake/Lydian equation at 1.78.3. At this point in the *Histories*, Herodotus associates excessive territorial growth not with the Persians but with the Lydians under Croesus. They are the region's strongest group: 'At this time, in Asia there was no *ethnos* more manly or warlike than the Lydian' (1.79.3). They carry 'tall spears' (δόρατα ... μεγάλα). This power typically leads to excessive growth, and the Lydian king desires expansion.[56] Growing at the expense of the other groups in the region, he crosses the Halys and attacks Cyrus (1.75.2–6).[57] When the Persians counter-attack, the Lydians are

[48] E.g. Flower 2006: 285.

[49] Mitchell 2021: 93 only notes that both snakes and Persians have a 'variegated' (ποικίλοι) appearance, listing Hdt. 1.111, 5.49, 7.61, 7.75, 9.80, 9.82, 9.109. See also Griffiths (2001: 162–3).

[50] Demont 2022: 52; Mitchell 2021: 102; Clarke 2018: 140.

[51] Ap. Rhod. 4.88: φρουρὸν ὄφιν ('guardian snake'). Ogden 2013: index s.v. 'guardians, snakes as'. See also Demont 2022: 52 n. 13.

[52] Demont 2022: 57; How and Wells 1928: 291.

[53] Mitchell 2021: 102. Pagel 1927: 33: 'die Natur wird hier wie ein Rechtsstaat angesehen, in dem die Pflicht, den ermordeten Vater zu rächen, auf die Kinder übergeht' ('Nature is seen here as a legal state in which the duty to avenge the murdered father passes to the children').

[54] Ogden 2013: 254–8. On p. 256, Ogden writes: 'For both Aeschylus and Euripides, the Erinyes are strongly serpent-associated or are indeed she-serpents themselves.'

[55] Holmes 2015: 49.

[56] Clarke 2018: 204.

[57] Croesus' crossing of the Halys (1.75.3–6) also relates the invasion of space to the momentary disruption of an existing pattern – the water course that constitutes an obstruction. As Clarke 2018: 227 emphasizes, this crossing 'in some ways prefigures the later sequence of iconic Persian river crossings in the service of aggressive imperialism', although she is careful to note the 'important differences of degree' between Croesus' and the Persians' transgressive acts.

'not afraid' (οὐ ... δειλοί, 1.80.6), a key trait motivating divine action at 3.108.2. Cyrus can defeat them only with a trick involving predictions about usual horse behaviour (1.80.2). Before the Persian victory over the Lydians, the gods send a signal to Croesus in the form of a snake invasion, as if giving him a last chance to curb his self-confidence. In what Herodotus confirms to be a 'portent' (τέρας), when snakes fill (ἐνεπλήσθη) the Sardian *proasteion* or suburbs, 'horses eat them' (ἵπποι ... κατήσθιον, 1.78.1), temporarily abandoning their usual diet. Snake reproduction results in the invasion of space, and the elimination of a group from an area takes the form of exhaustive consumption as at 3.108.1–2, a passage that resonates through the verbs ἐμπίπλημι ('fill') and κατεσθίω ('eat'). The Telmessian seers explain that the unusual snake and horse behaviours mean that the snakes are the Lydians and will be defeated by the Persians, but this message arrives too late (1.78.3).[58] Unusual animal behaviours (albeit not explicitly denoted as cases of unrealized *physis*) accompany a divine action as the excessive growth of one group is curbed, as Herodotus describes at 3.108. After the destruction of Croesus' 'great empire' (μεγάλην ἀρχήν, 1.53.3, 1.91.4), the Lydians lose their assertiveness, and are pacified following Croesus' advice (1.155–6). They no longer lay claim to the space of other groups.

The Persian kings occupy whole swathes of territory. When Darius becomes king thanks to a horse trick in a *proasteion* and divine thunder, 'everyone in Asia except the Arabs was Darius' subject, because Cyrus and then Cambyses subdued them' (οἱ ἦσαν ἐν τῇ Ἀσίῃ πάντες κατήκοοι πλὴν Ἀραβίων, Κύρου τε καταστρεψαμένου καὶ ὕστερον αὖτις Καμβύσεω, 3.88.1). Darius uses marriage as a means to curb the growth of competing lineages. When these lineages pass under Darius' control, we are told that 'everything *was full* of his power' (δυνάμιός τε πάντα οἱ ἐπιμπλέατο, 3.88.3). This figurative use of 'fullness' evokes an image of Asia entirely under Darius' control. Obviously, Darius and his soldiers do not physically fill the entire space of Asia, nor can they possibly control everything happening there. The image rather emphasizes the absolute power that Darius has supposedly acquired. Even if exaggerated, Herodotus' holistic language insinuates that no room is left in Asia for the growth of another power. He conveys absolute power with the same verb he uses for snakes' world domination at 3.108.1: πίμπλημι. This echo would not necessarily imply that Persian control of Asia is at odds with divine foresight.

[58] Herodotus takes the timing of the oracle as a retroactive confirmation of its accuracy (1.78.3). Although he does not make it explicit, it is probable that according to an underlying oral version, 'Croesus was encouraged by the straightforward equation "horses = Lydians, snakes = Persians"' (Griffiths (2001: 162). This oral version would not require a universal 'snakes = Persians' equation, because it relies on other specifics like the prominence of Lydian cavalry and Persian infantry.

Parts of Darius' expansion in this continent appear to have divine sanction, for example, his capture of Babylon, which is 'fated' (μόρσιμον, 3.154.1).[59]

A desire for infinite growth later makes an appearance among Xerxes' aspirations, in which the metaphor of filling up space is implicit. Herodotus places this idea in Xerxes' mouth (7.8c.1–2):

> γῆν τὴν Περσίδα ἀποδέξομεν τῷ Διὸς αἰθέρι ὁμουρέουσαν. οὐ γὰρ δὴ χώρην γε οὐδεμίαν κατόψεται ἥλιος ὁμουρέουσαν τῇ ἡμετέρῃ, ἀλλὰ σφέας πάσας ἐγὼ ἅμα ὑμῖν μίαν χώρην θήσω, διὰ πάσης διεξελθὼν τῆς Εὐρώπης.
>
> We will show that the Persian land is bordering Zeus's realm. Because the Sun will certainly not gaze upon any land that is bordering ours. But together with you, I will traverse all of Europe and put all lands into one land.

This drive to maximize growth would disturb the hierarchy between mortal and immortal realms by imagining Xerxes as Zeus's neighbour. It triggers Artabanus' warning about the dangers of incurring a god's envy by growing too much (7.10e). Xerxes' desire for limitless growth is accompanied by a blatant lack of justice. Emphasizing that 'no one will be left' (οὐδὲν ἀνθρώπων ὑπολείπεσθαι) to oppose him, the king adds that after his conquest of Europe, not only those who have wronged the Persians (i.e. Athens and Eretria), but 'also guiltless people will become their slaves' (οὕτω οἵ τε ἡμῖν αἴτιοι ἔξουσι δούλιον ζυγὸν οἵ τε ἀναίτιοι, 7.8c.3).

Maximalist expansion resonates several times in Herodotus' representation of Xerxes. Before the Greek expedition, Xerxes dreams that the branches of his olive wreath 'occupy the entire earth' (γῆν πᾶσαν ἐπισχεῖν), but then the wreath 'disappears' (ἀφανισθῆναι) from his head (7.19.1). The magi interpret the dream to mean that 'he will seize hold of the entire earth and enslave all humans for himself' (φέρειν τε ἐπὶ πᾶσαν γῆν δουλεύσειν τέ οἱ πάντας ἀνθρώπους). This dream differs from the two of Astyages signalling Cyrus' domination of Asia. Astyages dreams that 'his daughter urinates so much that it *fills* his city and floods *all* Asia' (οὐρῆσαι τοσοῦτον ὥστε πλῆσαι μὲν τὴν ἑωυτοῦ πόλιν, ἐπικατακλύσαι δὲ καὶ τὴν Ἀσίην πᾶσαν, 1.107.1), and that 'a vine *grows* from his daughter's genitals, and the vine *covers all* Asia' (ἐκ τῶν αἰδοίων τῆς θυγατρὸς ταύτης φῦναι ἄμπελον, τὴν δὲ ἄμπελον ἐπισχεῖν τὴν Ἀσίην πᾶσαν, 1.108.1).[60] In Cyrus' case, the whole of Asia, not the entire earth, is at stake, while in Xerxes' dream the olive wreath which covers the entire earth disappears, evoking Artabanus' jealous god who does not let others 'show themselves' (φαντάζεσθαι, 7.10e). In the ensuing narrative, the Persians can only temporarily 'hold' (ἐπέσχε, 7.127.1; ἐπέσχον, 8.32.2) parts of Europe.[61] Persian

[59] Cf. Hdt. 1.4.4, 8.109.3.

[60] Cf. Cambyses' dream of Smerdis' head touching the sky: Hdt. 3.30.2.

[61] It is also temporarily that 'the Scythians occupied all Asia' (οἱ δὲ Σκύθαι τὴν Ἀσίην πᾶσαν ἐπέσχον, 1.104.2).

and snake growth apparently become problematic when they target 'the entire earth' (3.108.1, 7.19.1).

Xerxes' invading army fills up space in memorable ways. After finally crossing the Hellespont, Xerxes sits on a throne on a hill (probably the Abydonian acropolis, modern Maltepe)[62] and 'looking down at the shore, he watched his infantry and ships' (κατορῶν ἐπὶ τῆς ἠιόνος ἐθηεῖτο καὶ τὸν πεζὸν καὶ τὰς νέας, 7.44). He sees 'the entire Hellespont covered by his ships, and all the shores and fields of the Abydonians *full* of his men' (πάντα μὲν τὸν Ἑλλήσποντον ὑπὸ τῶν νεῶν ἀποκεκρυμμένον, πάσας δὲ τὰς ἀκτὰς καὶ τὰ Ἀβυδηνῶν πεδία ἐπίπλεα ἀνθρώπων, 7.45). The use of ἐπίπλεα ('full of'), cognate with πίμπλημι, stresses the maximization entailed in Persian expansion, as at 3.108.1 and 3.88.3. It is perhaps not the entirety of Europe that is literally filled by Xerxes, but in a given area of Europe all the space he can see around him is full of his power.[63] In his elation he is reminded of his mortality, the ultimate curbing of human growth. He weeps and has a Solonian conversation with Artabanus (7.45–7).[64]

Watching from high on his throne at the Hellespont, Xerxes also desires to see his ships compete in their lower position, not unlike the ecologist god of 3.108–9 who surveys competing animal groups. His vantage point places him above the competition among the supposedly inferior men below.[65] The height difference, as repeated elsewhere (7.212; perhaps: 4.85.1, 88.1), ominously presents Xerxes in a godlike position, which is the impression he gives the locals (7.56.2). Admittedly, Herodotus does not present Xerxes as a one-dimensional villain, as shown for example by his respect for Zeus while crossing the Hellespont (7.40.4) and other gestures of piety (7.43.2, 54.2).[66] Still, despite his relatively positive aspects, Xerxes' maximalist approach to growth presents a threat to the absolute power of the divine. The king and his magi typically overlook their expansion's negative evaluation by the divine, misreading bad omens like the solar eclipse at the Hellespont (7.37.1). The Persian arrows are later imagined as 'hiding' (ἀποκρυπτόντων) the sun, almost imitating an eclipse (7.226.2). The repetition of the verb ἀποκρύπτω evokes the ships covering the sea at 7.45. The image reflects the huge size of the Persian army. This expression of Persian spatial expansion chimes with Xerxes' plan to establish his border with Zeus's aether, at which point he will control all the land under the sun (7.8c.1).

In Herodotus' snake invasions, we find similar expressions of spatial expansion that implicitly echo the tension we examined at 3.108–9. In his account

[62] How and Wells 1928: 147.

[63] Hdt. 8.4.1 similarly describes how, after the storms at Artemisium, Xerxes' 'army was everywhere' (στρατιῆς ἅπαντα πλέα).

[64] Solon famously understands well-being in terms of human mortality, not financial wealth, when he tells Croesus that 'one must look at the end of each matter' (σκοπέειν δὲ χρὴ παντὸς χρήματος τὴν τελευτήν, 1.33). On the programmatic importance of the Solon–Croesus dialogue, see Kingsley 2024: 4–5.

[65] Xerxes organizes a cavalry race in Thessaly, where Greek horses 'lose decisively' (ἐλείποντο πολλόν, 7.196), a report Herodotus juxtaposes with that of the local rivers extinguished by his army (see below).

[66] Bridges 2014: 63–9.

of the sacred animals of Egypt, winged snakes repeatedly try and fail to conquer the country (2.75.3):

> ἅμα τῷ ἔαρι πτερωτοὺς ὄφις ἐκ τῆς Ἀραβίης πέτεσθαι ἐπ᾽ Αἰγύπτου, τὰς δὲ ἴβις τὰς ὄρνιθας ἀπαντώσας ἐς τὴν ἐσβολὴν ταύτης τῆς χώρης οὐ παριέναι τοὺς ὄφις ἀλλὰ κατακτείνειν.
>
> In the spring, winged snakes from Arabia fly to Egypt. The ibises encounter them at the entrance of this land, do not let them pass but kill them.

This seasonally recurring attack is described as a military campaign elsewhere: 'they march on Egypt' (ἐπ' Αἴγυπτον ἐπιστρατεύονται, 3.107.2).[67] We are not given the reasons behind the expedition. Its seasonal nature dovetails with a predictability based on snake *physis*. Their natural 'expansionist' tendency, as we saw above (7.8c.1), is denoted by the counterfactual that they would fill the earth unless the divine stymied their *physis* (3.109.1).

One similarity between this snake campaign and Xerxes' Greek expedition arises from the location of the battle, which bears a significant resemblance to Thermopylae.[68] Herodotus locates the snake–ibis war at a pass near the town of Buto to the north-east of the Nile Delta.[69] Buto (modern Tell el-Farein) is about 60 km away from Pelusium, the first town one reaches after taking the only feasible land entrance into Egypt (3.5.1–3, 10.1, 11.1). Herodotus indicates that he went to the pass near Buto to inquire about the winged snakes, where he saw snake bones of 'indescribable quantity' (πλήθεϊ μὲν ἀδύνατα ἀπηγήσασθαι, 2.75.1).[70] The entrance into Egypt, where the ibises fight the snakes, happens to be a 'narrow mountain pass [opening] to a great plain, and this plain borders on the Egyptian plain' (ἐσβολὴ ἐξ ὀρέων στεινὴ ἐς πεδίον μέγα, τὸ δὲ πεδίον τοῦτο συνάπτει τῷ Αἰγυπτίῳ πεδίῳ, 2.75.2).[71] Herodotus later stresses the narrowness of the mountain pass at Thermopylae several times in his account of Xerxes' attack on the sole land entrance into Greece.[72]

Herodotus' reason for describing the pass near Buto is presumably to locate the snake bones he claims to have inspected *in situ*, anticipating objection. That this was supposed to be an air battle throws into relief his description. Dead flying snakes would fall somewhere, but why a mountain pass, as if the (flying) invaders had to walk into the land? My point is not whether Herodotus is lying or not, but what such details tell us about the parallels between his treatment of snake infestation and Persian expansion. The ostensibly trivial image of the narrow mountain pass would certainly evoke Thermopylae for a generation of Greeks very familiar with Leonidas and his 300 Spartans. A small group of men

[67] Demont 2022: 52.
[68] Clarke 2018: 140, 288.
[69] Lloyd in Asheri et al. 2007: 290.
[70] Locating the pass is difficult because the Suez Canal has altered the area's geomorphology. For possible locations, see Lloyd 1976: 327–8.
[71] Wilson accepts Stein's emendation στεινὴ over the manuscripts' στεινῶν.
[72] Narrowness: Hdt. 7.175.1, 200.1, 223.2–3; entrance into Greece: Hdt. 7.175.2, 176.2.

stops Xerxes' large army, while the ibis, later described by Aelian as 'girly' and 'slow-moving', stops the fierce winged snakes every spring.[73] The underlying idea of the scenes at both Buto and Thermopylae is the curbing of the excessive growth of a mighty attacker defeated by an underdog.

It is difficult to assess whether Herodotus would have seen the divine as a factor in this animal battle. The context is certainly sacred, since he introduces the snake–ibis battle as an etiological account to explain why this ibis is sacred. It is 'because of this feat' (διὰ τοῦτο τὸ ἔργον, 2.75.4), namely the prevention of the snake invasion, that Egyptians greatly honour the black crested ibis. The idea that all animals in Egypt are sacred (2.65.1) could be lurking behind the effort to stop the winged snakes, which divine foresight restrains (3.108–9).[74] The hindering of the snake invasion by the sacred ibis (Thoth's animal, but Herodotus tries to avoid details: 2.65.2) tallies with Herodotus' view of divine foresight at 3.108–9.

Since these winged snakes would make life unliveable for humans (3.109.1), their invasion of Egypt would result in the extinction of the Egyptians.[75] Centuries later, this point is emphasized by Aelian, who ascribes a protective role to the bird: 'Or else, what would prevent Egyptians from perishing by the arrival/prevalence of snakes?' (ἢ τί ἂν ἐκώλυσε διὰ τῆς ἐκείνων ἐπιδημίας τοὺς Αἰγυπτίους ἀπολωλέναι;, *NA* 2.38). Aelian's ibis 'fights for its beloved land' (τῆς γῆς τῆς φίλης προπολεμοῦσαι, 2.38), for a land which Herodotus' divine foresight prevents the snakes from filling (3.109.1). Moreover, Aelian's assumption that ibis reproduction follows the phases of the Moon god also endows this animal's battles with divine significance.[76] The internal and later external evidence thus suggests that Herodotus (or his sources) envisioned the ibis–snake battle as subject to divine intervention, like the Persian Wars.

Herodotus does not vouch for the snake–ibis *logos* (2.75.3) as he does for the Sardis portent ('and so it was', ὥσπερ καὶ ἦν, 1.78.1) and the Arab account of winged snakes ('I knew', ἠπιστάμην, 3.108.1). Still, he asserts that both Egyptians and Arabs agree on the snake–ibis war, providing additional support beyond the snake remains he claims to have seen with his own eyes. His autopsy at the mountain pass is full of unexpected detail, listing both 'bones' (ὀστέα) and 'spines' (ἀκάνθας), and lingers on the huge number of bone heaps perhaps in an effort to forestall disbelief: 'there were large, [somewhat] smaller, and much smaller heaps' (σωροὶ δὲ ἦσαν μεγάλοι καὶ ὑποδεέστεροι καὶ ἐλάσσονες ἔτι τούτων, 2.75.1). The scene Herodotus conjures at the pass near Buto almost evokes a war memorial. It resembles the other skeleton autopsy he conducts on a battlefield: his notorious observation of the strong Egyptian skulls and weak Persian skulls of those who died at the

[73] Ael. *NA* 2.38: 'It walks slowly and girlishly, and no one would see it advancing more quickly than walking speed' (βαδίζει δὲ ἡσυχῆ καὶ κορικῶς, καὶ οὐκ ἂν αὐτὴν θᾶττον ἢ βάδην προϊοῦσαν θεάσαιτό τις).

[74] On Egyptian animal worship, see Munson 2001: 93–5.

[75] The oracle of Amun defines Egyptians as those 'who live above Elephantine and drink the Nile' (Αἰγυπτίους εἶναι τούτους οἳ ἔνερθε Ἐλεφαντίνης πόλιος οἰκέοντες ἀπὸ τοῦ ποταμοῦ τούτου πίνουσι, 2.18.3). Given this divine definition, if Egypt is overrun by these snakes, Egyptians as a group will become extinct and cannot survive by emigrating.

[76] Ael. *NA* 2.38: 'The bird is sacred to the moon. It lays eggs on as many days as the goddess waxes and wanes' (ἱερὰ τῆς σελήνης ἡ ὄρνις ἐστί. τοσούτων γοῦν ἡμερῶν τὰ ᾠὰ ἐκγλύφει, ὅσων ἡ θεὸς αὔξει τε καὶ λήγει).

Battle of Pelusium (3.12), after which Cambyses invaded Egypt.[77] The battlefield or wherever the human skeletons were placed must be in the vicinity of Pelusium. As with the winged snake remains, this information combines autopsy ('I saw', εἶδον) and local knowledge ('having learned from the locals', πυθόμενος παρὰ τῶν ἐπιχωρίων, 3.12.1).[78] The human bones are 'heaped' (περικεχυμένων, 3.12.1) like the snake bones (κατακεχύαται, 2.75.2).[79] The shared image of 'heaped bones' at Buto and Pelusium is striking. So is the proximity of the two locations. Lloyd positions the mountain pass close to Tell el-Defennah.[80] If true, the heaps of snake remains are near Pelusium.[81] The same local guide could well have narrated Cambyses' invasion and the winged snake attack.

Herodotus' reports on Pelusium contain further similarities with the implicit divine action in the Siege of Sardis. Like the portentous snake invasion before the Persian expansion into Lydia (1.78), the 'great portent' (φάσμα ... μέγιστον, 3.10.3) of rain at Thebes precedes the Persian invasion of Egypt. In both cases, an unidentified power disrupts observably regular patterns in the world.[82] Pelusium too evokes the divine foresight of 3.108 when it is the scene of another divine intervention in animal behaviour, also during human conflict. A deity (presumably Hephaestus) intervenes to help the weaker army by changing the consumption habits of mice (2.141.1–6). When the priest of Hephaestus (Ptah) ruled Egypt, Sennacherib's 'large army of Arabs and Assyrians' (στρατὸν μέγαν Σαναχάριβον βασιλέα Ἀραβίων τε καὶ Ἀσσυρίων, 2.141.2) attacked Egypt, but the Egyptian soldiers refused to fight. The deity tells the Egyptian king not to worry in his dream, and before the Assyrian army attacks Egyptian civilians at Pelusium, field mice eat the enemy's weapons, thus causing their defeat. In this episode, divine intervention in observable norms in the world once again accompanies an underdog's victory.

The invasion of the Neuri land by snakes also exhibits verbal parallels with the language Herodotus uses to describe Persian expansion. Describing the human groups neighbouring Scythia, Herodotus mentions the Neuri, who may be sorcerers because they become wolves for a few days once a year, as reported from two sources (4.105.2). Snakes invaded the Neuri country a generation before Darius unsuccessfully invaded Scythia (4.105.1):

> γενεῇ δὲ μιῇ σφεας πρότερον τῆς Δαρείου στρατηλασίης κατέλαβε ἐκλιπεῖν τὴν χώρην πᾶσαν ὑπὸ ὀφίων. ὄφιας γάρ σφι πολλοὺς μὲν ἡ

[77] On the combined effect of Egyptian customs and the physical properties of the sun on skull thickness, see Thomas 2000: 31–2.

[78] Scullion 2022: 105–9 doubts that Herodotus saw these remains and argues that his claim for autopsy at Buto and Pelusium simply enhances the reporting of oral accounts. My argument for the similarities between the two passages does not require actual autopsy.

[79] Cf. the buried Greek tombs at Plataea: Hdt. 9.85.1–3.

[80] Lloyd 1976: 327–8; Asheri et al. 2007 *ad* Hdt. 2.75.

[81] Leclère et al. 2014: 3; Bernand 2000: 1119. Herodotus refers to Tell el-Defennah as 'Daphnae of Pelusium' (2.30.2–3), indicating its proximity to Pelusium.

[82] Another, probably coincidental, similarity is that at both Sardis and Pelusium the Persian invader is designated as 'of another tongue' (ἀλλόθροος), a term that is otherwise only found in epic and the tragic chorus. Its use at 1.78.3 by the Telmessian seers is expected, given the metrical and archaizing style of oracles. At Pelusium, however, its use by the Greek and Carian mercenaries in Egypt seems ironic (3.11).

> χώρη ἀνέφαινε, οἱ δὲ πλεῦνες ἄνωθέν σφι ἐκ τῶν ἐρήμων ἐπέπεσον, ἐς οὗ πιεζόμενοι οἴκησαν μετὰ Βουδίνων τὴν ἑωυτῶν ἐκλιπόντες.
>
> *One generation before Darius' campaign*, it happened that [the Neuri] *left* their whole land because of snakes. Because their land made many snakes *appear*, and more snakes attacked them from the northern deserts. The Neuri were *pressed* to such an extent that they *left* their own land and settled with the Budinians.

This is an example of the situation described at 3.109.1, namely snakes filling an entire area and making it unliveable for humans, 'pressing them to leave'.[83] A group being pressed to leave its land does not seem out of the ordinary in nomadic Scythia.[84] Referring to this snake invasion, Mitchell argues that the distance of Scythia from Greece allows Herodotus to describe its inhabitants and events in 'a mythological framework' which substitutes 'chronological distance for physical distance'.[85] But Herodotus relates the snake invasion chronologically to that of Darius a generation later, thus placing it on a continuum with human actions. If there is a temporally distant element that the snakes evoke, it is the tradition (rejected by Herodotus) according to which Scythians are descended from a snake-human ancestor (4.8–10).

This invasion evokes wars among animals, because it leads the shape-shifting wolf-men to leave their territory, as depicted in 3.108–9. The human/non-human boundary blurs at the edges of the earth.[86] For instance, the cannibal neighbours of the odd werewolf Neuri have the 'wildest customs' (ἀγριώτατα ... ἤθεα, 4.106.1) and live without justice or *nomos*. At the edges of the earth, there are areas dominated by animals, such as the uninhabited northern regions from which the snake invaders came (4.105.1), or the parts of Libya where only animals live (2.32.4, 4.181.1, 191.3; cf. 4.174). However, there is no indication that Herodotus considers the divine as a factor in the animal domination of these areas. He rejects the Thracian idea that 'bees control the land beyond the Ister' (μέλισσαι κατέχουσι τὰ πέρην τοῦ Ἴστρου, 5.10), instead postulating cold air as the reason for the scarcity of humans north of the Danube.

The snake invasion of the Neuri occurs because 'their land makes them appear' (ἡ χώρη ἀνέφαινε). Herodotus uses the verb ἀναφαίνω in various passages where divine intervention is implicit or explicit. Part of 'god's great revenge' (ἐκ θεοῦ νέμεσις μεγάλη, 1.34.1) on Croesus is a great boar that 'emerged' (ἀνεφάνη) from Mount Olympus in Mysia and indirectly caused the death of his son (1.36.2). The same verb is used to express the rising of the River Dyras to save Heracles from fire in anti-Scamandrian fashion (7.198.2). Elsewhere, the verb appears in oracular and ominous contexts (e.g. Hom. *Il.* 1.87, 11.62; Pind. *Pyth.* 4.62). In Xenophon, gods are the subject: 'They revealed stars at night' (ἄστρα ἐν τῇ νυκτὶ ἀνέφηναν,

[83] See n. 17 above. [Aesch. *Suppl.* 262–70...]

[84] Cf. Hdt. 4.11.1: the Scythians are '*pressed* by the Massagetae in war' (πολέμῳ πιεσθέντας ὑπὸ Μασσαγετέων) to cross the Araxes; 4.13.2: the Cimmerians are '*pressed* by the Scythians *to leave* their country' (ὑπὸ Σκυθέων πιεζομένους ἐκλιπεῖν τὴν χώρην). Cf. 8.77.1.

[85] Mitchell 2021: 83, 111.

[86] Mitchell 2021: 83–102; cf. Munson 2001: 236.

Mem. 4.3.4). Herodotus' word choice, then, combined with his observations on divine interest in snake reproduction (3.109), implies an underlying ominous aspect, especially given that the event is temporally related to Darius' invasion. When Darius attacks, instead of fighting him, the Neuri flee back to their country, which is presumably no longer snake-infested (4.125.5).

The verb ἐκλείπω, which Herodotus employs twice in the Neuri snake-invasion episode, evokes his description of the motivations of divine foresight for counteracting *physis*. Recall that at 3.108.2, the divine has reduced predators' fertility and made their prey more productive 'so that they will not go extinct (ἐπιλίπῃ) by being eaten'. Recall also that Xerxes expects 'no one will be left' to oppose him after his conquest of Europe. Most strikingly, the image of extinguishing emerges in the repeated exhaustion of rivers by Xerxes' army.[87] The Scamander (7.43), Melas (7.58.3), Lisus (7.108.2), Echedorus (7.127.2), Onochonus (7.196), Apidanus (7.196) and a fishy lake by Pistyrus (7.109.2) are drunk dry.[88] This is precisely the fate divine foresight wants to avoid for weaker animal species (3.108.2). In these hyperbolic accounts of water consumption, Herodotus uses the verb ἐπιλείπω (here 'run dry') four times (7.43.1, 58.3, 108.2, 127.2). This depiction of expansion has the invading army fill up the space of Europe while eliminating its component parts. A parallel image of evacuation by filling recurs when the Greeks in Thrace have to feed Xerxes' army: even though the soldiers are full, they leave no movable object behind them (7.119.4).[89] Here, it is not space they fill, rather they themselves literally empty the space they are passing through. Unlike the rivers pressed by Xerxes, and the Neuri pressed by snakes, the Athenians do not 'leave Greece' (ἐκλιπεῖν τὴν Ἑλλάδα, 7.139.6), although they briefly evacuate Athens (cf. 7.139.1). Herodotus is explicit that they are able to do this 'together with their gods' (μετά γε θεούς, 7.139.5). The Sun god can 'leave' (ἐκλιπεῖν) too, disrupting the usual course of atmospheric phenomena, as a warning against excessive growth: 'The sun left its celestial seat and became invisible' (ὁ ἥλιος ἐκλιπὼν τὴν ἐκ τοῦ οὐρανοῦ ἕδρην ἀφανὴς ἦν, 7.37.1).[90]

Conclusion

The verbal echoes between episodes of snake infestation and Persian expansion show that, for Herodotus, the tension between the natural and the divine underlies the expansion of both humans and non-humans. They also suggest that this tension helps express a critique of the drive for maximum growth. The tension presented at 3.108–9 has relevance for the power dynamics among human groups. Temporary divine intervention in the natural dispositions of animals accompanies some of

[87] Clarke 2018: 200–1.

[88] The destruction of rivers is closely related to rendering an area uninhabitable by humans. Men. Rhet. 2.16.14–15 (Race) contains a later depiction of Pytho (an enormous snake whose '*physis* is neither utterable in word, nor easily believable when heard', φύσιν οὔτε λόγῳ ῥητὴν οὔτε ἀκοῇ πιστευθῆναι ῥᾳδίαν, 2.16.14), who made Delphi uninhabitable for humans by consuming entire rivers and herds, and was therefore killed by Apollo (Ogden 2013: 164 n. 98).

[89] See also 8.115.2.

[90] Zingross 1998: 141.

the conflicts between unequal powers – even without explicit reference to *physis*. Herodotus uses common imagery to depict the expansion of snakes and Persians. The implicit divine actions in these depictions reveal that his view of the nature–god tension influences both his ethnographic and historical statements.

The connections between reproduction and expansionism explored above rely on Herodotus' dynamic treatment of the natural and the divine.[91] The divine only *partially* curbs the natural expansion of mortals. Instead of equating the natural with the divine, or the complete dominance of one over the other, we find a shared dynamism that leaves room for temporal and spatial variations of powers and capacities.[92] For Herodotus, the divine is not inherently against the growth of either snakes or Persians, but acts only when they endanger the existence of others by filling the space which other groups inhabit. He leaves room for an irreducible element in the *physis* of entities, namely their potential for growth. His juxtaposition of natural dispositions with the divine generates a dynamic of growth and decline that applies not only to humans, but to all mortal creatures. As a result, the view that Herodotus sees the world as a system in equilibrium should be qualified with the assertion that he recognizes shifting patterns in moments of order and disorder. Balance appears when one looks at the world as a whole. As soon as one focuses on a particular temporal or spatial segment of the world, one finds asymmetry and reciprocal attempts at encroachment. This dynamic view accounts for the episodes of oppression and cruelty, the individuals who remain unavenged within their lifetimes and the conditions that generate victorious underdogs in the *Histories*.

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[91] That the divine is sometimes just a co-factor has already been observed by Harrison 2000: 67 (on Hdt. 9.100–1).

[92] This dynamism chimes with Herodotus' pessimism described by Asheri: 'Herodotus' fatalism is not a dogmatic principle but an attitude which comes and goes' (in Asheri et al. 2007: 37).

Appendix

Functional chiasmus[93] (3.108.2–109.3) inside Herodotus' frankincense ring (3.107.2–110.1)[94]

Chiastic Element	Counterfactual Result (if *physis* were the only force)	Against *Physis*	Through the Nature–God Pair, Herodotus Explains
A-B polygonia-oligogonia (3.108.2: πολύγονα ... ὀλιγόγονα)	Stronger animals would eat weaker animals to extinction.	God has made it so that stronger animals do not eat weaker animals to extinction.	Why stronger animals do not eradicate weaker animals.
A polygonia (3.108.3: πολύγονός)	Viviparity in harmless rabbits would lead to insufficient rabbit growth and their extinction through being eaten.	God has bestowed superfetation upon rabbits, boosting their numbers.	Why rabbits survive despite being hunted by all predators. Why rabbits are prolific despite being viviparous. Why rabbits present superfetation.
B oligogonia (3.108.4: ἅπαξ ἐν τῷ βίῳ τίκτει ἕν)	Viviparity in assertive lions would lead to excessive population growth and the extinction of the meek.	God has added the sharpest claws and uterine laceration to lions, restraining their numbers.	Why lions do not produce large numbers of offspring. Why lions have the sharpest claws. Why lions expel the womb during birth.
B' oligogonia (3.109.1–2: εἰ ἐγίνοντο ὡς ἡ φύσις αὐτοῖσι ὑπάρχει)	Oviparity in snakes that are harmful to humans would lead to the extinction of humans.	God has bestowed viviparity, sexual cannibalism, and matriphagy upon winged snakes and vipers.	Why vipers and winged snakes do not produce large numbers of offspring. Why vipers and winged snakes practice viviparity, sexual cannibalism, and matriphagy.
A' polygonia (3.109.3: πολλόν τι χρῆμα τῶν τέκνων)	—	God has not offset the reproductive system of all snakes.	Why snakes that do not threaten humans are oviparous.

[93] I take this passage to be an example of what van der Eijk 1997: 107 n. 112 has called a 'functional chiasmus' after Slings: 'in contexts where two items are first stated and then discussed individually the chiastic order A B B' A' is preferred over the parallel order A B A' B' in cases where the comment (A' B') is more complex'.

[94] Demont 2022: 47–8 analyses Herodotus' ring composition in his depiction of frankincense production (3.107.2–110.1). My detection of a second chiasmus inside the frankincense ring is inspired by Demont's discussion of the double chiasmus in the highly relevant passage of Pl. *Prt.* 321b7–c3 (Demont 2022: 60–1).

Bibliography

Asheri, David, Alan Lloyd and Aldo Corcella (2007), *A Commentary on Herodotus Books I–IV* (Oxford).

Bakker, Egbert J. (2006), 'The syntax of *Historiē*: how Herodotus writes', in Carolyn Dewald and John Marincola (eds.), *The Cambridge Companion to Herodotus* (Cambridge), 92–102.

Bernand, André (2000), 'Map 74 Delta', in Richard J. A. Talbert (ed.), *Barrington Atlas of the Greek and Roman World* (Princeton), 1117–24.

Bianchi, Emanuela, Sara Brill and Brooke Holmes (2019), *Antiquities beyond Humanism* (Oxford).

Bodson, Liliane (2014), 'Zoological knowledge in ancient Greece and Rome', in Gordon Lindsay Campbell (ed.), *The Oxford Handbook of Animals in Classical Thought and Life* (Oxford), 556–78.

Bosak-Schroeder, Clara (2020), *Other Natures: Environmental Encounters with Ancient Greek Ethnography* (Oakland).

Bowie, Angus M. (2012), 'Mythology and the expedition of Xerxes', in Emily Baragwanath and Mathieu de Bakker (eds.), *Myth, Truth, and Narrative in Herodotus* (Oxford), 269–86.

Bridges, Emma (2014), *Imagining Xerxes: Ancient Perspectives on a Persian King* (New York).

Clarke, Katherine (2018), *Shaping the Geography of Empire: Man and Nature in Herodotus'* Histories (Oxford).

Demont, Paul (2011), 'La πρόνοια divine chez Hérodote (III, 108) et Protagoras (Platon, *Protagoras*)', *Méthexis* 24: 67–85.

— (2022), 'Herodotus (and Protagoras) on the foresight of the divine (3.107–110)', *Syllogos* 1: 46–64.

Dillery, John (2024), 'Twice-occurring terms in Herodotus: random distribution, habit of presentation and deliberate pairings', *JHS* 144: 122–43.

Dodds, E. R. (1959), *Plato:* Gorgias (Oxford).

Flower, Michael (2006), 'Herodotus and Persia', in Carolyn Dewald and John Marincola (eds.), *The Cambridge Companion to Herodotus* (Cambridge), 274–89.

Freiría, Fernando Martínez, José C. Brito and Miguel Lizana Avia (2006), 'Ophiophagy and cannibalism in *Vipera latastei* Boscá, 1878 (Reptilia, Viperidae)', *Herpetological Bulletin* 96: 26–28.

Greenwood, Emily (2018), 'Surveying greatness and magnitude in Herodotus', in Elizabeth K. Irwin and Thomas Harrison (eds.), *Interpreting Herodotus* (Oxford), 163–86.

Griffiths, Alan (2001), 'Kissing cousins: some curious cases of adjacent material in Herodotus', in Nino Luraghi (ed.), *The Historian's Craft in the Age of Herodotus* (Oxford), 161–78.

Harrison, Thomas (2000), *Divinity and History: The Religion of Herodotus* (Oxford).

Holmes, Brooke (2015), 'Situating Scamander: "natureculture" in the *Iliad*', *Ramus* 44.1–2: 29–51.

— (2017), 'Foreword: before nature?', in Christopher Schliephake (ed.), *Ecocriticism, Ecology, and the Cultures of Antiquity* (Lanham), ix–xiii.

How, W. W., and J. Wells (1928), *A Commentary on Herodotus* (Oxford).

Immerwahr, Henry R. (1966), *Form and Thought in Herodotus* (Cleveland OH).
Kahn, Charles H. (1960), *Anaximander and the Origins of Greek Cosmology* (New York).
Kingsley, K. Scarlett (2024), *Herodotus and the Presocratics: Inquiry and Intellectual Culture in the Fifth Century BCE* (Cambridge).
Lamont, Jessica L. (2023), *Blood and Ashes: Curse Tablets and Binding Spells in Ancient Greece* (Oxford).
Lateiner, Donald (1989), *The Historical Method of Herodotus* (Toronto).
Leclère, François, Alan J. Spencer and Alan Johnston (2014), *Tell Dafana Reconsidered: The Archaeology of an Egyptian Frontier Town* (London).
Lloyd, Alan B. (1976), *Herodotus Book II, Commentary 1–98* (Leiden).
Macé, Arnaud (2012), 'La naissance de la nature en Grèce ancienne', in Stéphanie Haber and Arnaud Macé (eds.), *Anciens et modernes par-delà nature et société* (Besançon), 47–84.
Maritz, Bryan, Graham J. Alexander and Robin A. Maritz (2019), 'The underappreciated extent of cannibalism and ophiophagy in African cobras', *Ecology* 100.2: e02522 [https://esajournals.onlinelibrary.wiley.com/doi/10.1002/ecy.2522]
Mattison, Chris (2007), *The New Encyclopedia of Snakes* (Princeton).
Mitchell, Fiona (2021), *Monsters in Greek Literature: Aberrant Bodies in Ancient Greek Cosmogony, Ethnography, and Biology* (New York).
Munson, Rosaria Vignolo (2001), *Telling Wonders: Ethnographic and Political Discourse in the Work of Herodotus* (Ann Arbor).
Ogden, Daniel (2013), Drakōn*: Dragon Myth and Serpent Cult in the Greek and Roman Worlds* (Oxford).
Pagel, Karl August (1927), *Die Bedeutung des aitiologischen Momentes für Herodots Geschichtsschreibung* (Borna and Leipzig).
Pelling, Christopher (1991), 'Thucydides' Archidamus and Herodotus' Artabanus', *BICS* 37, Supplement 58: 120–42.
— (2019), *Herodotus and the Question Why* (Austin).
Romm, James S. (2006), 'Herodotus and the natural world', in Carolyn Dewald and John Marincola (eds.), *The Cambridge Companion to Herodotus* (Cambridge), 178–91.
Schliephake, Christopher (2020), *The Environmental Humanities and the Ancient World: Questions and Perspectives* (Cambridge).
Scullion, Scott (2022), 'Herodotus as tour guide: the autopsy motif', in K. Scarlett Kingsley, Giustina Monti and Tim Rood (eds.), *The Authoritative Historian: Tradition and Innovation in Ancient Historiography* (Cambridge), 101–20.
Thomas, Rosalind (2000), *Herodotus in Context: Ethnography, Science, and the Art of Persuasion* (Cambridge).
Vaan, Michiel de (2008), *Etymological Dictionary of Latin and the Other Italic Languages* (Leiden).
Van der Eijk, Philip J. (1997), 'Towards a rhetoric of ancient scientific discourse: some formal characteristics of Greek medical and philosophical texts

(Hippocratic Corpus, Aristotle)', in E. J. Bakker (ed.), *Grammar as Interpretation: Greek Literature in Its Linguistic Contexts* (Leiden), 77–129.
Vlastos, Gregory (1975), *Plato's Universe* (Oxford).
Wilson, Nigel G. (2015), *Herodoti Historiae*, 2 vols. (Oxford).
Zingross, Mary (1998), *Herodotus' Views of Nature* (Athens).