

Anaximander's un-String Theory

ἀρχὴ πάντων (χρημάτων)—what? Hardly τὸ ἄπειρον without preparation.¹

an organizing principle that is also powerful and simple . . . 'A Landscape of possibilities populated by a megaverse of actualities.'²

It begins with Alcman, who lived at Sparta where he wrote songs for girls' choruses in the late seventh/early sixth century BCE. Dance lyrics don't at first glance offer much in the way of cosmic speculation, so perhaps understandably in canvassing prior work Aristotle ignores Alcman, if indeed he had even heard of him. "Yet it is in fact," West writes, "from this surprising source [a choral lyric of Alcman's] that we get our first glimpse of 'philosophical' cosmogony." West's paraphrastic reconstruction:

"In the beginning there was a waste of waters, conceived as trackless and featureless (ἄπορον, ἀτέκμαρτον). In it Thetis was or came to be, and upon her appearance, or perhaps as a result of something she did, the boring uniformity of the primeval ocean was disturbed by the emergence of Track and Feature (Πόρος, Τέκμων). There was darkness then at first, but it was followed by day, and the moon and stars."³

West esteemed Alcman's cosmogony because "it is the formal and not the material aspect of the original chaos that is put in focus and treated as needing modification: not 'out of the waters came earth', but 'out of the ἄπορον καὶ ἀτέκμαρτον came πόρος καὶ τέκμων'. This is truly abstract thinking."⁴ Truly all the more abstract because neither 'waters' nor 'primeval ocean' is in the Greek.⁵ Very little of the fragment seems to be Alcman verbatim (the lemma), and most of it a commentator's Aristotelizing gloss in ὕλη-ἀρχή-τέλος jargon which is, says West, "of course to be disregarded."⁶ So all Alcman says is, in effect, 'Out of the undifferentiated

¹ M. L. West, *Early Greek Philosophy and the Orient* (1971) 78. He goes on, "Greek writers do not present new concepts in such a way. τὸ ἄπειρον is Aristotle's and Theophrastus' summary name for Anaximander's first principle . . ."

² Leonard Susskind, *The Cosmic Landscape: String Theory and the Illusion of Intelligent Design* (2006) 380.

³ *EGPO* 206-207.

⁴ *Id.* 207.

⁵ Vol. 24 *The Oxyrhynchus Papyri* No. 2390 fr. 2 (ed. E. Lobel 1957). More widely accessible in *Poetae Melici Graeci* (ed. D. L. Page 1962) p. 24. Glenn W. Most reproduces Claude Calame's 1983 edition in "Alcman's 'Cosmogonic' Fragment (Fr. 5 Page, 81 Calame)," 37 *The Classical Quarterly* 1 (1987). Gloria Ferrari gives a more literal rendering of the scant text in her *Alcman and the Cosmos of Sparta* (2008) 32. West gives his reasons for believing Alcman's to be a water-cosmogony in "Alcman and Pythagoras," 17 *The Classical Quarterly* 1 at 3-5 (1967).

⁶ M. L. West, "Three Presocratic Cosmologies," 13 *The Classical Quarterly* 154, 155 (1963).

came, thanks to Thetis, differentiation – paths and landmarks. It was still dark, then light came, and the celestial bodies.⁷

‘Who ordered *that*?’ The irruption of this concept seems to be a case of *die Sprache spricht*. Alcman was a poet, after all, inheritor of a rich tradition of polar expressions. “The Indo-European ability to create negative compounds with the prefix **h₂-* made it easy to form expressions of the type ‘X and non-X;’” such that “One may say that bipolarity (not trifunctionality) is the fundamental structuring principle of Indo-European thought.”⁸ The structure of Indo-European languages makes them readily productive of, in Holton’s terms, *thema-antithema* pairs.⁹ “An especially widespread and long-lasting formula,” per West, “is ‘seen and unseen.’”¹⁰ It was just a question of time then until ‘marked and unmarked,’ ‘featured and featureless’ popped up in some mind. And this was most likely to happen in the thoughts of a professional word-guy; someone who’s always recombining lexemes in his head in the search for something new.¹¹

Now to Anaximander: if ἄπειρον is ‘non-X’ then what is X? In what must the ‘preparation’ consist for the term ἄπειρον to make some worthwhile new sense, and not be just a whimsical privative?

⁷ Standing on the far side of the twentieth century one may readily hallucinate into this image an initial *nada*, then the instantaneous clumpiness (thanks to quantum-Thetis) fossilized in the microwave background radiation (the light that came on long post-Bang), and the luminous descendants of that clumpiness, the sheets and filaments of galaxies—tracks and features at the largest scale we can see. “Within the first few minutes the universe had cooled enough for the first atomic nuclei to form. A long uneventful period followed, and then at about 400,000 years electrons and nuclei combined into electrically neutral atoms. Consequently, the universe became transparent to light, so photons were free to stream ahead unimpeded. These photons now come to us from all directions in the sky as the cosmic background radiation. Minute differences in the cosmic radiation intensity tell us that some of these photons came from regions that were slightly more or less dense. These tiny density fluctuations in the early universe grew larger and larger as gravitational attraction dialed up the contrast between high and low density regions. In about a billion years these fluctuations had turned into the first galaxies. Dark matter played a crucial role in this process. Galaxies continued to grow via mergers. Larger structures like clusters and superclusters also continued to emerge until about five billion years ago, when the universe became dominated by the vacuum energy and the structure formation process came to a halt.” Delia Perlov and Alex Vilenkin, *Cosmology for the Curious* (2017) 343-344. But it’s important, or so it’s said, to keep a grip.

⁸ M. L. West, *Indo-European Poetry and Myth* (2007) 101, 100.

⁹ See Gerald Holton, “On the Role of Themata in Scientific Thought,” 188 *Science* 328 (1975) and his *Thematic Origins of Scientific Thought: Kepler to Einstein* (rev. ed. 1988).

¹⁰ *Id.* 102.

¹¹ The art of the Indo-European poet, by Watkins’s account, “is to say something wholly traditional in a new and interesting, but thereby more effective way. It is verbal activity, artistically elaborated, but directed toward a more or less immediate, concrete goal.” The verbal formulas of this activity are, he says, “the vehicles of themes,” and “in the totality of these [themes] we find the doctrine, ideology, and culture of the Indo-Europeans. These formulas are collectively the verbal expression of the whole traditional culture of the Indo-Europeans.” Calvert Watkins, *How to Kill a Dragon: Aspects of Indo-European Poetics* (1995) 68. The practice of trying to say something new and interesting (variation) occasionally results in the saying of something wholly *un*traditional—a fundamental innovation, a paradigm-buster, a viable mutation.

Heidegger denies that Anaximander is a philosopher of matter. “Whence something comes to be,” Heidegger writes, “is ordinarily called its matter [*Stoff*], and if beings—all of them—come to be out of, and decompose into, the same matter, then the whence-whither is the basic matter [*so ist das Woher-Wohin der Grundstoff*].” And Heidegger waxed not-even-wrong wroth against the reading of ἀπειρον as some sort of *Stoff*, through which reading “people go out of their way to praise Anaximandros for having already advanced so far in physics and chemistry. . . . as if

Anaximandros had ever asked about matter and the basic matter. This view of Anaximandros and his physics is not even false; it is so far removed from the content of his teaching that it does not grasp the least of it and so does not even rise to the level of the false and wrong.”¹²

One of the people going out of their way to praise Anaximander on this score was none other than Heisenberg, who wrote (long after Heidegger’s remark just quoted),

“The idea of the fundamental substance was then carried further by Anaximander, who was a pupil of Thales and lived in the same town. Anaximander denied the fundamental substance to be water or any of the known substances. He taught that the primary substance was infinite, eternal and ageless and that it encompassed the world. This primary substance is transformed into the various substances with which we are familiar. Theophrastus quotes from Anaximander: ‘Into that from which things take their rise they pass away once more, as is ordained, for they make reparation and satisfaction to one another for their injustice according to the ordering of time.’ In this philosophy the antithesis of Being and Becoming plays the fundamental role. The primary substance, infinite and ageless, the undifferentiated Being, degenerates into the various forms which lead to endless struggles. The process of Becoming is considered as a sort of debasement of the infinite Being—a disintegration into the struggle ultimately expiated by a return into that which is without shape or character. The struggle which is meant here is the opposition between hot and cold, fire and water, wet and dry, etc. The temporary victory of the one over the other is the injustice for which they finally make reparation in the ordering of time. According to Anaximander, there is ‘eternal motion,’ the creation and passing away of worlds from infinity to infinity.”¹³

¹² Martin Heidegger, *The Beginning of Western Philosophy: Interpretation of Anaximander and Parmenides* (tr. Richard Rojcewicz 2015) 7; *Gesamtausgabe Band 35*: 8: <https://www.beyng.com/gaapp/recordband/35>.

¹³ Werner Heisenberg, *Physics and Philosophy: The Revolution in Modern Science* ([his Gifford lectures 1955-56] 1958) 60-61. Why Heisenberg might have admired such a vision is intimated by this one: “Heisenberg’s uncertainty principle had suggested that matter could pop into existence for incredibly short periods of time. Now Dirac had provided the mechanism out of which matter could be created out of the vacuum and just as quickly disappear again. . . . Whenever a particle pops out of empty space so simultaneously does its antiparticle. . . . So whenever you try to remove everything you can from empty space, it’s still always awash with all these fluctuations. Within nothingness there’s a kind of physics, a dynamic dance as pairs of particles and antiparticles borrow energy from

The interpretation which Heisenberg repeats and Heidegger deplors has its roots in the doxographic tradition. As West writes, for once in tacit agreement with Heidegger,

“When Simplicius says, of Anaximander’s ἀρχή, λέγει δ’ αὐτὴν μήτε ὕδωρ μήτε ἄλλο τι τῶν καλουμένων εἶναι στοιχείων, ἀλλ’ ἐτέραν τινὰ φύσιν ἄπειρον [he says that it’s neither water nor any other of the named elements, but some other-natured ‘unbounded’], he imports a false antithesis, and one that results from over-schematic classification of early thinkers. Theophrastus’ version was less misleading: ‘He does not say what the boundless is, whether air or water or earth or some other corporal entity.’ But it is still barking up the wrong tree. τὸ ἄπειρον is not a material, or a denial of other materials, it is a denial of limits. In a cosmological context, it is a denial of the kind of limits that other people had talked about in cosmological contexts: the πείρατα of earth, sea, sky, and Tartarus, which were intimately linked with their ‘sources’. Anaximander says that they have their sources in a boundless Beyond, inexhaustible and imperishable. The ancients were in error in treating him as a monist in the mould of Thales.”¹⁴

Not a positing of yet another archi-hulē, but a denial of πείρατα as the ultimate or sufficient account. “When I try to envisage something that Anaximander might have said,” says West, “I find it easiest to do so on such lines as these:

τῶν ὑπὲρ γῆς καὶ τῶν κάτω γῆς ἐόντων πείρατα μὴ δίξω, ἀλλὰ ἐς ἄπειρον ἰκνεῖται πάντη, καὶ ἐξ ἀπείρου ξυνέστη τὰ πρῶτα. αὕτη γὰρ ἀρχὴ πάντων ἐγενετο, αὐτὸ δὲ ἀρχὴν οὐκ ἔχει οὐδὲ πέρασ, ἀλλὰ ἀίδιον ἐστι καὶ ἀγήρων, καὶ πάντα ἐν ἐωυτῷ ἔχει καὶ πάντα κυβερνᾷ.”¹⁵ [my try: Do not seek the πείρατα of beings above and beneath the earth—even the first πείρατα (or, taking τὰ πρῶτα as absolute, ‘the first things’) from all sides plunge into and rise up together out of the ἄπειρον; for it is the very *archē* of all, itself having neither *archē* nor πέρασ, eternal and unaging it holds all in itself and steers all.]

the vacuum for brief moments before annihilating and paying it back again.” *Everything and Nothing: The Amazing Science of Empty Space* (dir. Nic Stacey 2016) 1:42:19 - 1:43:27.

¹⁴ *EGPO* 79. West here corrects in silence what he wrote eight years before, viz.: “[Anaximander] postulates as the basic state of the universe an amorphous and undifferentiated infinity of *matter* . . .” “Three Presocratic Cosmologies” 173 (my emphasis).

¹⁵ *EGPO* 78-79. Just to underline its provenance: this Greek text is West’s own composition, his imagination of what Anaximander might have written. West had in mind, among other passages from other authors, this from Hesiod:

ἔνθα δὲ γῆς δνοφερῆς καὶ Ταρτάρου ἠερόεντος
πόντου τ’ ἀτρυγέτοιο καὶ οὐρανοῦ ἀστερόεντος
ἐξείης πάντων πηγαὶ καὶ πείρατ’ ἔασιν

ἀργαλέ’ εὐρώεντα, τὰ τε συγγέουσι θεοὶ περ. *Theogony* 807-810. West translates (1988) πηγαὶ καὶ πείρατα ‘sources and extremities,’ where ‘swirling waters and holdfasts’ may point the contrast more concretely.

What are πείρατα? That word (singular πείρα or πέρασ), as West implies, is synecdoche for a *Geschick des Seins*, a ‘dispensation of being,’ a disclosure of ‘the way things are.’ Now for any disclosure we must recall the First Law of Finitude: “There can be no disclosure or unconcealment without simultaneous concealment.”¹⁶ Anaximander’s ἄπειρον asserts that πείρατα as disclosure of the way things are conceals – as does any *Geschick des Seins* in “the self-effacing of a world or understanding of being when it is in operation”¹⁷ – that it is **not** the final account, the ultimate sense of things. Yet Anaximander does not deny that the world consists in πείρατα.

Πείρατα? Heidegger’s gloss:

“πέρας—limit [*Grenze*], but not so much in the merely negative sense as that by which and at which something stops and can go no further but, on the contrary, that which outlines something [*was etwas umreißt*], its contours and inner delineation [*Umriß und innerer Aufriß*], that which in each case gives to all that appears, all beings, their closed peculiarity and security, their composure and their stance.”¹⁸

West and Heidegger point the way; it’s for us to go along it. Lucky we are that West and before him Onians cut the trail.

Indo-European had no word for ‘universe.’ So speakers of Indo-European languages had to express the notion by formal indication, unsaturated *deixis*:

“Early Greek has no term for ‘the world’. It has to say ‘earth, sea, sky, and Tartarus’ (Hes. *Th.* 736) or the like. Anaximenes uses ‘what was, is, and shall be’, perhaps under oriental influence. Heraclitus speaks of ‘this set-up’, ὁ κόσμος ὄδε (fr. 51 = B 30), and probably of ‘all this’, τάδε πάντα (fr. 79 = B 64). The first of these expressions is only a variant of the second, and it is the second that interests me here. Xenophanes B 27 says ἐκ γῆς γὰρ τάδε πάντα καὶ ἐς γῆν πάντα τελευτᾷ, . . . Parmenides B 19. 1 speaks simply of τάδε. Empedocles has τοῦτο τὸ πᾶν (17. 32), τάδε πάντα (35. 5), τὰ νῦν ἐσορῶμεν ἅπαντα (38. 2). Plato has τὸ ὄλον τοῦτο (*Gorg.* 508 a), οὐ τὸ πᾶν τόδε (*Tim.* 29 d, 37 d, 41 a, c, 48 a, 69 c). . . . Here, then, we have an accepted idiom for ‘the universe’, using the deictic ‘this’, which first appears in Heraclitus and Xenophanes.”¹⁹

¹⁶ Joan Stambaugh, *The Finitude of Being* (1992) 2.

¹⁷ Katherine Withy, “Concealing and Concealment in Heidegger,” 25 *European Journal of Philosophy* 1496 (2017); <https://www.beyng.com/docs/Withy-Concealing.html> .

¹⁸ *The Beginning of Western Philosophy* 23; GA 35: 28.

¹⁹ *EGPO* 196. West documents the idiom for other IE languages at *IEPM* 341.

For Indo-European culture ‘all this’ is texture—a weave or wicker that binds together.²⁰ “Of this beautiful prehistoric vision,” West writes, “only fragmented echoes remain in the Rigveda and the other traditions at our disposal.” He’s commenting here specifically on an image in the *Mahābhārata*:

“Weaving was an ancient craft, familiar to the Indo-Europeans. . . . Early looms were often operated by two women, one on each side to pass the shuttle back to the other. The goddesses Night and Day fit neatly into this role. If we now recall the ancient theory attested in the Vedas, and perhaps by the Trundholm sun-disc, that the sun travels to and fro across the sky, bright by day and dark by night, it becomes obvious that this corresponds to the shuttle that the two sisters pass between them, drawing the alternate white and black threads. With this insight the whole weaving image becomes sharp and coherent. Of this beautiful prehistoric vision, etc.”²¹

Also from Olivelle’s commentary we learn that ‘Upaniṣads’ means something like ‘Networks,’ even ‘*Bewandtnisganzheit*.’ Olivelle writes,

“The central concern of all vedic thinkers, including the authors of the Upaniṣads, is to discover the connections that bind elements of these three spheres [the ritual, the cosmic, the human body and person] to each other. The assumption then is that the universe constitutes a web of relations, that things that appear to stand alone and apart are, in fact, connected to other things. . . . In the early vedic literature the term most commonly used for ‘connection’ is *bandhu*, a term derived from a verb meaning ‘to bind’, ‘to connect’. *Bandhu* commonly means a kin, but when one thing is said to be a *bandhu* of another, the meaning is that the former is connected to or is a counterpart of the latter. The earliest usage of the important term *upaniṣad* indicates that it too carried a similar meaning: *upaniṣad* means ‘connection’ or ‘equivalence.’”²²

Nets, wicker, ropes, and cloth are very old, very widespread technology; there is evidence that Neanderthals twisted plant fibers into cordage.²³ Before animal fiber (e.g., fleece) can be woven to make cloth it must first be worked into yarn; i.e., straightened and spun. West found it “not hard to understand why spinning is such a pervasive image for the fixing of human destinies. It was a very ancient craft, and eminently suited to symbolize the conversion of loose, incoherent

²⁰ As it was for the Aztecs: “Backstrap weaving is one of the principal organizing metaphors employed by Aztec metaphysics in conceiving the structure and working of reality and cosmos. Olin, malinalli, and nepantla motion-change are all involved in weaving. Backstrap weaving includes spinning, twisting, bobbing, shuttling, undulating and spinning. . . . Aztec metaphysics conceives the cosmos as a grand weaving-in-progress.” James Maffie, *Aztec Philosophy: Understanding a World in Motion* (2014) 479.

²¹ *IEPM* 373-374. A photo of the Trundholm sun-disc appears on the cover of the paperback edition.

²² Introduction to *Upaniṣads* (tr. Patrick Olivelle 1996) lii.

²³ B. L. Hardy *et al.*, “Direct evidence of Neanderthal fibre technology and its cognitive and behavioral implications,” *10 Scientific Reports* 4889 (2020). <https://doi.org/10.1038/s41598-020-61839-w> .

possibilities into something definite, something that, like a human life, grows continuously longer but sooner or later is cut off.”²⁴ Hence the near-ubiquitous spinster-goddesses of Fate—“supernatural females attending the birth of each child and establishing the contours of its life then and there as it lay in its cradle”—the Moirai, Parcae, Norns, Láimas, etc.,²⁵ and their remains found in the likes of the tale of Sleeping Beauty (the Grimms’ ‘Briar Rose,’ *Dornröschen*).

West says “I do not know of any Indo-Iranian evidence for this idea [the spinster Fates],” but we can note the similarly structured doctrine of the three *guṇas* – threads, strands – in *The Song of God*, where Krishna instructs Arjuna that

“The *guṇas* called *sattva*, *rajas*, and *tamas* are born from Prakṛti, and they fetter [*nibadhnānti*] the eternal embodied souls to their bodies, strong-armed one. Among these *guṇas*, *sattva*, which because of its spotlessness is illuminating and salubrious, binds [*badhnāti*] the soul by means of an attachment to joy and an attachment to knowledge, prince sans blame. Know that *rajas* is characterised by passion and arises from an attachment to craving; it binds [*nibadhnānti*] the embodied soul by an attachment to action, Kaunteya. Know, on the other hand, that *tamas* arises from ignorance and deludes the embodied souls; it binds [*nibadhnānti*] through absentmindedness, sloth, and sleep, Bhārata. . . . By transcending these three *guṇas*, which are the sources of the body, the embodied soul rids himself of [*vimukto*, loosens from] the miseries of birth, death, and old age and becomes immortal.”²⁶

Onians had come upon this *Weltanschauung* (*Schickung*) of texture and bindings – what West calls ‘the World Wide Web’ – in the course of trying to resolve a famous crux in Homer: ταῦτα θεῶν ἐν γούνασι κεῖται—‘It lies on the knees of the gods.’ Of course this is “a picturesque way of saying that some issue rests with a higher power whose will is not yet known;” but what picture? “What mental image must be reconstructed to explain why the gods’ *knees* are mentioned?” The clue to resolution was another Homeric image: ἐπεκλώσαντο θεοί—‘the gods spun;’ “an image which seems to dominate ancient thought concerning the making of fate by the gods.” Just what is the process of spinning? Archaic technique involves the knees, the lap; as seen in action here: https://www.youtube.com/watch?v=D_p7OIghMVw . “The internal evidence of Homer,” Onians concludes from his review of the same, “is sufficient to show that his gods were habitually conceived as spinning what is to be.”²⁷

²⁴ *IEPM* 385.

²⁵ *Id.* 379-385.

²⁶ *The Bhagavadgītā in the Mahābhārata* (tr. J. A. B. van Buitenen 1981) 127, 129.

²⁷ Richard Broxton Onians, *The Origins of European Thought about the Body, the Mind, the Soul, the World, Time, and Fate: New Interpretations of Greek, Roman and kindred evidence also of some basic Jewish and Christian beliefs* (1951) 303, 304, 305, 309:

This insight seems to have unblocked the waters for Onians, for he proceeds immediately to tackle a second Homeric crux containing the word which is our key interest here, *πεῖραρ* (the chapter is entitled ‘Πείρατα’). The passage goes,

τοὶ δ’ ἔριδος κρατερῆς καὶ ὁμοίου πτολέμοιο
πεῖραρ ἐπαλλάξαντες ἐπ’ ἀμφοτέροισι τάνυσσαν
ἄρρηκτόν τ’ ἄλυτόν τε, τὸ πολλῶν γούνατ’ ἔλυσεν.²⁸

Again, what’s the visual? What exactly are Zeus and Poseidon, the subject of *τάνυσσαν*, doing to the clashing Argive and Trojan armies? After explaining why “Of *ἐπαλλάξαντες* the exact force is somewhat difficult to fix” Onians decides that “it is the obscure meaning of *πεῖραρ* which is at the root of the trouble.” He shows that *πεῖραρ* is not in the first instance ‘limit,’ nor by concretization ‘rope-end;’ commenting,

“In principle and origin weaving and wickerwork are one—their essence may be described as tying or binding. The Sanscrit stem, to which *πεῖραρ* and *πειραίνω* appear to be related, is *parvan-*, meaning ‘knot, link, joint’. We may also compare the Zend *parvand*, meaning ‘belt, girdle, band’. The sense of ‘rope, knot, or bond’ is clearly primitive as might have been expected. Endeavours to derive noun or verb from an abstract notion of ending or limiting are futile. . . . The real meaning of *πεῖραρ*, if by ‘real’ is intended ‘original’, we have perhaps shown to be not ‘limit’ as [Merry and Riddell] imagine but ‘cord, band, or bond’.”²⁹

Onians rejects the interpretation which imagines a tug-o-war between the two gods who have thrown ‘rope-ends,’ a limit, around and thereby enclosed the armies *en masse*. The conception, rather, “is of people not surrounded by a single bond but enmeshed in many as in a net. . . . It is not a single noose or bond encircling a whole host but a multiplicity of bonds either awaiting or already fastened over the individual or the host.”³⁰ The net, the weave, of fate. We can then see the Homeric image as thematically identical to one in *Njáls saga* cited by West, where the Valkyries do the weaving:

“Wide is the warp for the weapon-play,
a cloud of wrath raining blood,
Grey on the spears we here suspend
the warriors’ web, that with red weft
we thralls of Odin all over thread.

https://archive.org/details/epdf.pub_the-origins-of-european-thought-about-the-body-the-mind-the-soul-the-world-time-/mode/2up.

²⁸ *Iliad* 13.358-360; *Origins of European Thought* 310.

²⁹ *Origins of European Thought* 314, 320-321. He cites Sanskrit *bandhu-h* on 333, fn.

³⁰ *Id.* 321, 322.

This web's warps are the guts of wights,
weighted heavy with heads of men.
Bloodstained darts it has for stays,
the shafts are iron, the shuttles arrows:
with weapons keen must the weft be tamped."³¹

Onians takes up several more passages (π. πολέμου, οἰζύος, ὀλέθρου, and so on) of the same tenor as the original problem and shows that

"All these passages are descriptions of fate and are satisfied by the same image, that of *binding*; *πεῖραρ* is the *bond*. The solution is uniform and consistent, needing neither to compromise in 'rope-ends' nor to retreat upon a colourless abstraction—'limit', 'issue', 'crisis', 'sum'. Instead of vague periphrastic and unnecessary abstractions, it presents the concrete, a graphic image. To realise its nature is vitally important."³²

'Vitaly important' because these passages are the 'fragmented echoes,' in West's phrase, of an archaic *Geschick des Seins*. Onians says we should take them as

"no passing figments of the poet's brain but allusions to one of the images under which a whole people interpreted life and saw the working of fate, the action of the gods in things human, . . . a popular belief of what actually happens on that plane where divine and human meet—the mystical and, to the unprivileged eye, invisible. It is in short a part of the national religion, of the philosophy of the race. To such a belief allusive reference would naturally be made and instantly comprehended."³³

Yet what happens when Onians notices Anaximander? All is forgot, again, and he repeats the same Simplicius-to-Heisenberg reading of ἄπειρον as archi-hulē: "Though Anaximander with his 'Unlimited' (ἄπειρον) **as the primary substance** made a bolder break than Thales from the traditional scheme of things, etc."³⁴ My emphasis.

In Heidegger's interpretation, by contrast, Anaximander made **the** break from the traditional scheme of things. The evidence amassed by West and Onians shows that in this traditional schema beings-in-their-beingness, τάδε πάντα, are πείρατα. Onians observes that "πεῖραρ, a cord or bond, was the commonest means of construction."³⁵ West writes,

³¹ *IEPM* 385.

³² *Origins of European Thought* 324-325.

³³ *Id.* 325.

³⁴ *Id.* 251.

³⁵ *Id.* 342.

“The notion of cosmic weaving is also [as well as in the Vedas and the *Mahābhārata*] found in Greek, applied not to the succession of day and night but rather to the seasonal clothing of the earth with vegetation and crops. It is first documented in that same cosmogony of Pherecydes of Syros in which we found a world tree and an oceanic dragon. The tree supported a wonderful robe which Zas had made, decorated with the earth and surrounding ocean, and which he had bestowed upon his bride Chthonie, the primal earth goddess. An Orphic poem entitled *The Robe* (Πέπλος), attributed to the Pythagorean Brontinus, apparently described the ploughing and sowing of the earth as a weaving process that produced her dress.”³⁶

‘This set-up,’ ‘all this,’ is a massive texture; Darwin’s “entangled bank.” Anaximander’s privative ἄπειρον ‘allusively refers’ to this positive conception. It was Anaximander’s intent, according to Heidegger, “to speak about *Being*—and *not about Beings*.” Given the background we’ve been reviewing, the most concise locution for Anaximander to say ‘not-beings’ and be ‘instantly comprehended’ was ἄπειρον: un-πείρατα. In this way it may be at least intimated that “*Being itself is not a being. Being and beings are different—this difference is the most originary one that could ever open up. Therefore the result: Being is not the beings.*”³⁷

By way of coda we should briefly notice the thematic recurrence of Anaximander’s ‘τὸ ἄπειρον and πείρατα’ in modern cosmology’s ‘eternal inflation and strings.’ Strings, thematically a type of πείρατα, are the archi-hulē: “the basic building blocks of matter are one-dimensional strings,” Planck-length tiny and vibrating in ten dimensions at speeds close to that of light.³⁸ String theory provides for at least 10^{500} distinct *types* of vacua, types of physical universe with all the compossible settings of the ‘constants of nature.’³⁹ Perlov and Vilenkin estimate only about a 1 in 10^{117} chance of the occurrence of a vacuum with physical constants calibrated for supporting life as we know it.⁴⁰ What principle of selection picked our vacuum to occur? “Thus far, no such principle has ever been found.”⁴¹

Eternal inflation, true to its name, is a scientific theory of eternity. Leonard Susskind, here a recurrence of Anaximander, says in effect, ‘Don’t look only to the strings, τα πείρατα, for why our universe is such that we may be, look also to eternal inflation, τὸ ἄπειρον.’ Susskind – one of the three inventors of the original String Theory – does not in any way ‘deny strings,’ he

³⁶ *IEPM* 373.

³⁷ *The Beginning of Western Philosophy* 26; GA 35: 32.

³⁸ *Cosmology for the Curious* 292-293.

³⁹ “**Vacuum** – A background or environment in which the Laws of Physics take on a certain form.” “**Landscape** – The [mathematical] space of possible vacuums (environments) allowed by fundamental theory. In practice, the [mathematical] space of vacuums of String Theory.” *The Cosmic Landscape* 388, 385.

⁴⁰ *Cosmology for the Curious* 310.

⁴¹ *The Cosmic Landscape* 388.

simply concedes their inability to provide by themselves the mechanism for why our universe is as it is and not otherwise; as, e.g., sterile, impossible for life.⁴²

Greene writes, noting Susskind's influence here, that "if we weave eternal inflation into the tapestry" of string theory, then the following image emerges:

"The Inflationary Multiverse—the ever-expanding Swiss cheese cosmos—contains a vast, ever-increasing number of bubble universes. The idea is that when inflationary cosmology and string theory are melded, the process of eternal inflation sprinkles string theory's 10^{500} possible forms for the extra dimensions [possible types of vacua] across the bubbles—one form for the extra dimensions per bubble universe—providing a cosmological framework that realizes all possibilities. By this reasoning, we live in that bubble whose extra dimensions yield a universe, cosmological constant and all, that's hospitable to our form of life and whose properties agree with observations."⁴³

On this understanding the cosmos is a fractally self-similar phenomenon, so we should expect to find all kinds of bubbles within bubbles. The space of possibilities of meaningful presence – *die Lichtung* – is one such bubble within the larger bubble that is life – the space of possibilities of organisms – within the rather larger bubble that is our particular universe, a bubble within eternal inflation. As Heidegger puts it,

"Yet we must look around us still more thoroughly and contemplate the narrower sphere [*Umkreis*] within which we dwell, daily and hourly, knowing and unknowing, a sphere that constantly shifts its boundaries and suddenly is broken through."⁴⁴

This image suggests a metaphorical 'domain wall'⁴⁵ separating the finite local region which briefly possibilizes meaningfulness – call it '*Ereignis*' – from the "unworlded world"—*die entweltlichte Welt*, the "incomprehensible pure and simple," *das Unverständliche schlechthin*, "as it is discovered in physics."⁴⁶

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⁴² A quick glimpse into these ideas comes in the first few minutes of the dialogue here:

<https://www.youtube.com/watch?v=AuWDzQ-tiZ8&list=PLFJr3pJl27pKqs2yZ3LLJR0hpyIS-jxi9&index=13> .

⁴³ Brian Greene, *The Hidden Reality: Parallel Universes and the Deep Laws of the Cosmos* (2011) 178. "One form per bubble universe" may suggest inadvertently that each form occurs only once, which is incorrect. Susskind emphasizes that each of the 10^{500} possibilities gets instantiated again and again without bound. The Principle of Plenitude meets a Demiurge on meth.

⁴⁴ Martin Heidegger, *Introduction to Metaphysics* (tr. Gregory Fried and Richard Polt 2000) 37; GA 40: 37: <https://www.beyng.com/gaselis/?vol=40&pg=37> .

⁴⁵ *Cosmology for the Curious* 216-217.

⁴⁶ Martin Heidegger, *History of the Concept of Time: Prolegomena* (tr. Theodore Kisiel 1985) 217-218; GA 20: 298: <https://www.beyng.com/gaselis/?vol=20&pg=298> .