

Chapter 2

Apeiron: A Preliminary Understanding

In the fifty-four pages of the first chapter of his book *Infinity in the Presocratics*, Sweeney discusses “twenty-three noteworthy studies on Anaximander’s *to apeiron*”.¹ His book, however, is now more than fifty years old, and one may doubt whether his conclusion that “one possibly need not be concerned in detail with others which may come to light, since the twenty-three already investigated appear to cover the field very well”,² still holds (even if it perhaps could be defended at the time he wrote it). Moreover, although he groups several authors together, Sweeney’s chapter is rather an enumeration of interpretations and does not systematically distinguish different lines of interpretation. A thorough and up-to-date historic and systematic analysis of the many different interpretations of Anaximander’s ἄπειρον would be very helpful for the study of Anaximander’s principle.³ In this chapter, we try to sketch an outline of such a study, without having the least pretension of being complete. Most of the quoted texts and authors will be discussed more extensively in the following chapters.

Τὸ ἄπειρον is a noun in the neuter gender of the negative adjective ἄπειρος. The adjective ἄπειρος may connote ‘inexperienced’ and ‘ignorant’, of which we will refer to at the end of this chapter. Usually, however, it expresses a denial of borders: ‘boundless’, ‘infinite’. Etymologically, ἄπειρος is usually derived either from the word πέρας, or from πείρα, both in the sense of ‘limit’, ‘boundary’ or ‘end’. Charles Kahn has suggested a connection with the root *περ-, as in words such as πείρω, περάω, περαίνω, referring to a direction forward, where the

¹Sweeney (1972, 49).

²Sweeney (1972, 50).

³Mansfeld’s magnificent study (Mansfeld 2010), despite its title “Bothering the Infinite: Anaximander in the Nineteenth Century and Beyond”, focuses on (mainly one line, which he calls the ‘mystical, of) the interpretation of Anaximander’s fragment, rather than on the interpretation of ἄπειρον itself.

movement is also supposed to finish, and *πεῖρα* meaning ‘limit’ or ‘end’ in the sense of ‘goal’.⁴ Accordingly, the meaning of *ἄπειρος* should be verbal in the sense of ‘what cannot be passed over or traversed from end to end’ and thus ‘immense’ or ‘enormous’. Kahn argues that Homer and Hesiod called the Earth and the sea *ἀπείρων*, *ἀπείριτος*, *ἀπειρέσιος* and *ἀπερείσιος* but nevertheless spoke of their *πεύρατα*. In an analogous way, Kahn notes that the words *ἄπειρος* and *ἀπείρων* were not only used to describe circles, or rings, with the emphasis on their being uninterrupted or continuous, but also used in the context of nets and garments, meaning ‘without outlet’ or ‘past escape’. Kahn also points to Aristotle’s discussion of the word in his *Physics*, which is worth quoting here:

Let us begin, then, by inquiring in how many senses we use the term. If by saying that a thing has ‘no limit’ you mean ‘no boundary’, then you mean that its nature is such that it would be nonsense to speak of ‘passing through it from side to side’, just in the same way that a sound is ‘invisible’. But you might also mean that, though it is of such nature that you can traverse it, it does not admit (whether you are speaking absolutely or practically) of your getting ‘through’ it so as to come out beyond it. Or again you may mean that its nature would allow it to have a boundary such as to make it passable-through, but that in this case it has not. Again, the ‘absence of limit’ may mean capacity for being multiplied indefinitely, or for being divided indefinitely, or both.⁵

Aristotle thus describes τὸ ἄπειρον as ‘that which it is not possible to get through to the end of’ or ‘that which cannot be gone through’, that is, ἀδιέξοδος, which also may mean ‘having no outlet’ or ‘unable to get out’.⁶

After all, one may wonder how relevant Kahn’s etymology is for Anaximander, for in the end he states that “as a result of the philosophic usage that begins with Anaximander, the term is systematically opposed to *πέρας* and *πεπερασμένον* in such a way that it accumulates the senses of ‘unlimited’, ‘mathematically infinite’, ‘qualitatively indeterminate’ or ‘indefinite’”, and that “Anaximander probably defined τὸ ἄπειρον by opposition to *πέρας*”.⁷

In a mathematical context, τὸ ἄπειρον could be taken to refer to ‘the infinite’. To ascribe a similar meaning to Anaximander would be anachronistic since the subject of mathematical infinity came to be studied only later.⁸ As KRS points out, it is “uncertain that Anaximander himself intended τὸ ἄπειρον to mean precisely ‘the spatially infinite’”. We may legitimately doubt whether the concept of infinity was apprehended before questions of continuous extension and continuous divisibility were raised by Melissus and Zeno”.⁹

⁴Cf. Kahn (1994, 231–233). See also LSJ, s.v. *ἄπειρος*; *ἀπείρων*.

⁵Aristotle, *Phys.* 204a2–7. Translation Wicksteed and Cornford (1957).

⁶Aristotle, *Phys.* 204a14. Translations Wicksteed and Cornford (1957) and LSJ, s.v. ἀδιέξοδος. Kahn (1994), 233, reads ἀδιεξίτητος, which is used in Simplicius, *In Arist. Phys.* 9.470 and 9.471.

⁷Kahn (1994, 233 and note 1).

⁸Cf. Guthrie (1985, 85).

⁹Cf. KRS (2007, 109–110).

From the etymology and from Aristotle's analysis one might infer that the adjective ἄπειρος originally had spatial connotations, an idea which also prevails in the interpretations of most contemporary scholars. In this sense, Gottschalk contends that Anaximander chose the term ἄπειρον "precisely because it did not refer to the kind of substance but only to its vastness of extent".¹⁰

As a rule, these spatial connotations usually go hand-in-hand with material connotations, which indicate that τὸ ἄπειρον is usually conceived of as some kind of—unspecified—stuff. The Ionian interpretation of the ἀρχή as something material goes as far back as Aristotle and Theophrastus, who explained it as a kind of prime matter. However, since Cherniss' book and McDiarmid's article on Aristotle and Theophrastus on the Presocratics, scholars have learned to be on guard, since "Aristotle's accounts of earlier doctrines are so inextricably bound up with arguments for his own doctrine that history cannot be easily distinguished from interpretation", and as regards Theophrastus: "in almost every instance the meaning of the quotation [of a text of a Presocratic] is distorted to yield proof of an Aristotelian interpretation that is clearly impossible".¹¹ These statements may be too apodictic, but they still function as warning signs for the interpretation of Presocratic philosophy. With regard to Anaximander's ἄπειρον, we shall devote a chapter of this book to both Aristotle and Theophrastus.

Spatial interpretation and material connotations of Anaximander's ἄπειρον are often closely associated with the idea of an inexhaustible reservoir, "a source [that] is required for the sustenance of the world".¹² In this sense, Graham, who subscribes to Kahn's characterization of Anaximander's boundless as 'a spatially unlimited stuff', adds the possibility of seeing the boundless as "a kind of reservoir which assures that the particular kinds of matter will never run out".¹³ This, too, goes back to Aristotle. Just before mentioning Anaximander, he observes:

(...) there is no source of the infinite, but this seems to be a source of everything else, and to surround all things and steer all things.¹⁴

And immediately thereafter, when citing the third of five reasons for the supposition of something infinite in words that remind us of those used in Anaximander's fragment (or, as others would say, of words preceding Anaximander's fragment), he writes:

The belief in something boundless (τὸ ἄπειρον) would seem to arise especially from five considerations: (...) [3] from the fact that only in this way will coming to be and perishing not cease: so long as that from which what comes to be proceeds is boundless.¹⁵

¹⁰Cf. Gottschalk (1965, 53).

¹¹McDiarmid (1953, 86, 132–133).

¹²Kahn (1994, 233).

¹³Cf. Graham (2006, 31 and 34), our italics.

¹⁴Aristotle, *Phys.* 203b6–28 = DK 12A15 = Gr Axr16 = TP2 Ar2.

¹⁵Aristotle, *ibidem*, translation slightly adapted.

That Anaximander conceived of τὸ ἄπειρον as a kind of reservoir of matter that surrounds all things has become a kind of standard view and one that has been defended by numerous scholars. Heidel describes it as “ἀρχὴ καὶ πηγὴ lying about the world, from which it drew its sustenance (‘breath’), into which it finally yielded up the ‘ghost’.”¹⁶ Burnet visualizes τὸ ἄπειρον as a “boundless stock from which the waste of existence is continually made good”, before adding that “we must picture, then, an endless mass, which is not any one of the opposites we know, stretching out without limit on every side of the world we live in. This mass is a body, out of which our world once emerged, and into which it will one day be absorbed again”.¹⁷ Similarly, Jaeger also describes τὸ ἄπειρον as an “endless, inexhaustible reservoir or stock”.¹⁸

This view intermingles with the question of the location of τὸ ἄπειρον, which is frequently positioned outside of the world. Cornford points in the same direction, suggesting that τὸ ἄπειρον “remains outside the world as the ‘eternal’ background of the cycle of change and becoming”.¹⁹ Guthrie concurs, supposing that Anaximander “certainly regarded the *apeiron* as an enormous mass surrounding (...) the whole of our world”.²⁰ To these comments, we can also add Kahn’s: “the ἄπειρον of Anaximander is then primarily a huge, inexhaustible mass, stretching away endlessly in every direction (...) the great cosmic mass encircling the spherical body of our star-studded heaven”.²¹ Perhaps this kind of interpretation is also influenced by Anaxagoras’ phrase:

That which surrounds [the world] is boundless (ἄπειρον) in quantity.²²

The boundless lying outside the world has become the mainstream interpretation, which is only occasionally nuanced, for instance, by Bicknell, who states that “the *apeiron* was a vast expanse with no other characteristics, the pre-existent matrix of the other world constituents”. When interpreting the conception of τὸ περιέχον he supposes “that at least a portion of the *apeiron* is, like Anaximenes’ *aer*, within the single universe and not entirely beyond the orbit of the furthest (Sun-) ring” and that it “refer(s) to the internal environment in which the cosmic bodies are located.”²³ As will become clear in the subsequent chapters of this book, we are strongly opposed to both the interpretation of τὸ ἄπειρον as a kind of matter and to the interpretation of τὸ ἄπειρον as being outside the world.

¹⁶Cf. Heidel (1912, 228).

¹⁷Cf. Burnet (1930, 53, 58).

¹⁸Cf. Jaeger (1947, 24).

¹⁹Cf. Cornford (1952, 171).

²⁰Cf. Guthrie (1985, 85).

²¹Kahn (1994, 233–237).

²²Simplicius, *In Arist. Phys.* 9.155.30 = DK 59B2 = Gr Axx11. Translation slightly adapted.

²³Bicknell (1966, 44 and 37–38).

But let us continue our investigation of the meaning of the term ἄπειρος a little further. Several authors have read it as referring to something qualitatively indeterminate. In this interpretation, τὸ ἄπειρον becomes, as Graham says, “some kind of nondescript stuff as the basis of the world”.²⁴ Guthrie, for instance, ends his analysis of the meaning of ‘apeiron’ with the conclusion that of the several senses, “the notion of internal indeterminacy rather than of spatial infinity was uppermost in his mind”.²⁵ In the doxography we can find textual support for this interpretation, where the kinds of principles belonging to Thales and Anaximenes are called ‘determinate’ or ‘definite’ in opposition to Anaximander’s:

Anaximenes (...) was an associate of Anaximander, who says, like him, that the underlying nature is single and boundless, but not indeterminate (ἀόριστον), like him, but determinate (ὁρισμένην) (...).²⁶

Wöhrle reads this text as merely indicating that Anaximander left the meaning of his idea of ‘the boundless’ undetermined (“undefiniert”). In this case, it would infer something similar to those texts in which doxographers complain that Anaximander did not make clear what he meant by ‘the boundless’.²⁷ We think, however, Wöhrle’s translation of ἀόριστον as “undefiniert” is not right. Elsewhere, Simplicius uses the same word when discussing Theophrastus, who links Anaximander’s ‘boundless’ with Anaxagoras’ ‘mixture’, which he calls “a single nature indefinite” (μίαν φύσιν ἀόριστον).²⁸ Here, too, Wöhrle translates “undefiniert”, whereas Graham rightly twice has “indefinite”. Simplicius clearly does not mean to say that Anaxagoras and Anaximander left their principles undefined, but that their principles are themselves intrinsically indeterminate. Dührsen argues that in its primary meaning τὸ ἄπειρον stands for a qualitatively indifferent material substratum, but that in this context the expression must be seen against the background of the Aristotelian doctrine of the four elements which serve as an interpretive means (“ein Interpretament”) of Peripatetic doxography.²⁹

Gottschalk and Dancy have vehemently argued that the term ἄπειρον never originally carried or could carry the meanings of ‘qualitatively indeterminate’ or ‘indistinct’.³⁰ Gottschalk concludes that “there is not a scrap of evidence that the word could have this meaning”.³¹ Dancy maintains that “there is a longstanding

²⁴Cf. Graham (2006, 30).

²⁵Guthrie (1985, 86).

²⁶Simplicius, *In Arist. Phys.* 9.24.26 = DK 13A5 = Gr Axs3 = TP2 Ar163 = TP2 As133, translation slightly adapted. A similar text in Simplicius, *In Arist. De caelo* 7.615.8–21 = TP2 Ar192, not in DK and Gr.

²⁷See *Introduction*, note 4.

²⁸See Simplicius, *In Arist. Phys.* 9.27.2–23 = DK 59A41 = Gr Axx32 = TP2 Ar164 and 9.154.14–23 = DK 12A9a = Gr Axr15 = TP2 Ar170. We will discuss these passages in Chap. 4 more thoroughly.

²⁹See Dührsen (2013, 274–277).

³⁰Cf. Gottschalk (1965, 51–52), Dancy (1989, 170–172).

³¹Gottschalk (1965, 51).

dogma to the effect that something else that is meant when Anaximander says his ἀρχή is τὸ ἄπειρον is that it is qualitatively indefinite, indeterminate or at least undifferentiated.”³² According to him, this dogma can be traced back to Teichmüller³³ but appears in the interpretations of several recent scholars as well, among which he mentions Cornford, KRS, Kahn, Guthrie, Barnes, West and Furley.³⁴

Graham agrees with Gottschalk and Dancy that ‘boundless’ could never have meant ‘indeterminate’, but he still leaves the door somewhat open: “We may be justified in inferring from Anaximander’s failure to define his boundless further that it is an indeterminate stuff, but that will be an inference from his use of the term, not a meaning of it”.³⁵ We will return to this subject in Chap. 4.

Given Anaximander’s explanation of creation by a separation of opposites, τὸ ἄπειρον has also been interpreted as referring to an initial mixture (μῖγμα). Again in Guthrie’s words: “A primitive stuff must be, so to speak, a neutral in these hostilities, and must therefore have no definite characteristics of its own”.³⁶ This interpretation, which is akin to the above-discussed idea of a qualitatively indifferent principle, also goes back to Aristotle:

As the natural philosophers maintain, there are two ways [to account for change]. Some (...). The others separate out (ἐκκρίνεσθαι) the contraries from the one in which they are present, as does Anaximander, and everyone who says there is a one and a many, such as Empedocles and Anaxagoras. For from the mixture they too separate out everything else.³⁷

Cherniss reads this interpretation in Anaximander’s fragment B1, in which the plurals ὄν ... ταῦτα should “refer to the ἄπειρον and imply that the material principle of existing things is not a single entity but a multitude of some kind”.³⁸ Vlastos argues that in accordance with the doctrine of κρᾶσις in the medical writings of the fifth century BC, Anaximander’s τὸ ἄπειρον, as a compound of opposites, must be considered as a state of dynamic equilibrium (ἰσονομία). It is ‘one’ because “it does ‘contain’ the ‘opposites’; but these are so thoroughly mixed that none of them appear as single, individual things”.³⁹

Stokes is one of those who maintain that “the word ‘infinite’ in Presocratic Greek can of course mean *temporally* infinite”.⁴⁰ We already saw that Gottschalk and Dancy argued to the contrary, but in the doxography on Anaximander, τὸ

³²Dancy (1989, 170).

³³Cf. Teichmüller (1874, 57).

³⁴Dancy (1989, n. 158, 159, 161).

³⁵Graham (2006, 30).

³⁶Cf. Guthrie (1985, 86 and 120).

³⁷Aristotle, *Phys.* 187a12–23 = DK 12A9 and 12A16 = Gr Axr13 = TP2 Ar1. The first sentence does not appear in DK.

³⁸Cf. Cherniss (1935, 375–379).

³⁹Cf. Vlastos (1947, 172); in Furley and Allen (1970, 79).

⁴⁰Stokes (1976, 12).

ἄπειρον undoubtedly also has a temporal connotation, since as ἀρχή it is said to be ‘everlasting and ageless’, qualifications which Diels regards as authentic:

And this (viz. the ἀρχή considered as ‘a certain nature of the boundless’) is everlasting (ἄιδιον) and ageless (ἀγήρω).⁴¹

This passage seems to be an echo of Aristotle, who calls Anaximander’s ἀρχή ‘deathless and imperishable’, which words Diels also considers authentic. These epithets originally belong to the gods, and accordingly Aristotle also calls it ‘divine’:

And this (viz. the ἀρχή) is the divine (τὸ θεῖον), for it is deathless (ἀθάνατον) and imperishable (ἀνώλεθρον), as Anaximander says (...).⁴²

In one passage, τὸ ἄπειρον even seems to be identified with the everlasting (in Chap. 5, however, we will suggest another reading for ἐκ τοῦ αἰδίου):

He (viz. Anaximander) says that that part of the everlasting (τὸ ἐκ τοῦ αἰδίου) which is generative of hot and cold separated off at the coming to be of the cosmos (...).⁴³

Another meaning of this term, proposed by Finkelberg, deserves to be mentioned. Despite Aristotle’s and Simplicius’ unambiguous statements that Anaximander’s ἄπειρον is not one of the so-called elements,⁴⁴ Finkelberg, in a highly complicated article in which he pretends to unravel “Anaximander’s conceptual subtleties”, comes to the “unavoidable conclusion” that “in his conception of the *Apeiron* Anaximander combined two different, actually incompatible, ideas—the unchangeable ‘whole’ and the airy *arche*”, although he “failed to draw a clear-cut distinction between the higher nature of the *Apeiron* and its material appearance as air”.⁴⁵

Several authors have suggested possible Oriental influences on Anaximander’s thinking. According to Burkert, quoted with approval by West, the indication of the origin by means of a negative formula (ἄ-πειρον) must be clarified from the ancient Iranian, and not from the Greek tradition: “Im Griechischen führt kein Weg vom ἄπειρον zum θεῖον”.⁴⁶ He advocates a connection with the ‘Beginningless Light’ in the liturgy of the Avesta, which is paradise, the throne of Ahura Mazdāh (=Ohrmazd).⁴⁷ Fehling sees connections between Anaximander’s cosmogony and the doctrine of two elements (earth and water) in the story of creation in the Bible

⁴¹Hippolytus, *Ref.* I.6.1 = DK 12A11 = DK 12B2 = Gr Axr10 = TP2 Ar75.

⁴²Aristotle, *Phys.* 203b14–16 = DK 12A15 = DK 12B3 = Gr Axr16 = TP2 Ar2.

⁴³Pseudo-Plutarch, *Strom.* 2 = DK 12A10 = Gr Axr19 = TP2 Ar101; translation slightly adapted.

⁴⁴Cf. Aristotle, *Phys.* 204b22 = DK 12A16 = Gr Axr17 = TP2 Ar3; Simplicius, *In Arist. Phys.* 9.479.33 = TP2 Ar176, not in DK and Gr.; Simplicius, *In Arist. Phys.* 9.24.13 = DK 12A9 = Gr Axr9 = TP2 Ar163. These texts will be discussed in the following chapter.

⁴⁵Finkelberg (1993, 255, 254, and 253).

⁴⁶Burkert (1963, 118–119).

⁴⁷Cf. Burkert (1963, esp. 115). See also: West (1971, 91).

and in Sanchuniathon's cosmogony. He denies, however, that Anaximander had a principle like τὸ ἄπειρον.⁴⁸ Lebedev, in an article to which Fehling refers but from which Lebedev later disassociates himself, suggests Oriental influences, arguing that Anaximander spoke of 'boundless Time'.⁴⁹

There are two interesting studies that are important for our own interpretation and that we might call 'vitalistic'. Asmis argues that "the everlasting deity which is the *apeiron* (...) is one with the endlessly repeated alternation of generated things", or more fully, "the unending succession of generation and destruction (...) this is the *apeiron* itself".⁵⁰ And elsewhere, "the principle of justice itself brings about that the process is unlimited—in other words, that there is an *apeiron*".⁵¹ In the chapter *La 'physis'* of his book on Anaximander, Conche claims that for the Ionian physicists the word φύσις meant "l'action de faire naître et pousser".⁵² In the same chapter he seems to identify Anaximander's ἄπειρον with φύσις: "un autre nom pour l'infini est φύσις, la nature",⁵³ for which he finally coins the expression "force vitale infinie".⁵⁴ To be sure, Conche is critical as to an "interprétation vitaliste", which he defines as maintaining that Anaximander's ἄπειρον should be "un être vivant".⁵⁵ This is, however, a somewhat narrow definition of 'vitalism'. In a broader sense, Conche's "force vitale infinie", which will be discussed more extensively in Chap. 6, definitely may be called a vitalistic principle.

In this preliminary discussion we have quoted a number of passages that we will examine later on more thoroughly. At this stage, perhaps the best preliminary conclusion is that the term ἄπειρος may have carried a number of meanings simultaneously.⁵⁶ The question remains, however, which of these was predominant in Anaximander's thinking. The multitude of interpretations of Anaximander's principle is certainly due to the fact that so little is left of his original writings. There is reason, however, to suppose that it is also due to an inherent feature of Anaximander's style of writing, which Simplicius characterizes as 'poetic'. The classical authors whose texts are at our disposal more or less agree that Anaximander himself did not determine the meaning of τὸ ἄπειρον. Aetius, in words that have been conserved by Pseudo-Plutarch and Eusebius, and in a shortened form by Stobaeus, criticizes Anaximander for not stating what τὸ ἄπειρον is:

⁴⁸Cf. Fehling (1994, *passim*).

⁴⁹Cf. Lebedev (1978).

⁵⁰Asmis (1981, 279 and 283).

⁵¹Asmis (1981, 284). For similar formulations, see also pp. 295–279.

⁵²Conche (1991, 81).

⁵³Conche (1991, 82 and 128).

⁵⁴Conche (1991, 138).

⁵⁵Cf. Conche (1991, 142–143).

⁵⁶Cf. Couprie (2011, 90–91), Dancy (1989, 171–172), Gottschalk (1965, 51–52), Graham (2006, 29–30), KRS (2007, 109–111).

But he fails by not saying what the boundless is, whether air, water, or earth, or some other bodies.⁵⁷

And in the same sense Diogenes Laertius notes:

Anaximander (...) maintained that the principle and element is the boundless, without defining (οὐ διορίζων) it as air or water or something else.⁵⁸

A similar reproach is found in Simplicius, who claims that according to Porphyry Anaximander failed to define τὸ ἄπειρον:

Porphyry, however, (...) says that Anaximander characterized the substratum in a vague way (ἀδιορίστως) as boundless, without defining (οὐ διορίζαντα) its shape as fire, water, or air.⁵⁹

The way in which these reproaches are put into words reveals that from the very beginning, Anaximander's intentions were distorted because they were interpreted within the conceptual framework of Aristotle's philosophy. And, as we shall see in the next chapter, even Aristotle clearly had difficulties in understanding Anaximander. The very fact that he does not mention Anaximander in the first book of his *Metaphysics*, where he ascribes various particular ἀρχή to his predecessors, is significant. On the other hand, of course, everything we know about Anaximander is what Aristotle, his pupil Theophrastus and the doxography that is dependent on them tell us. According to Diogenes Laertius, Anaximander's treatise was seen by Apollodorus of Athens; thus, we may assume that in all plausibility it was available to members of the Peripatetic school as late as the second century BC.⁶⁰ Its presence in the library of the Hellenistic gymnasium in Taormina, Sicily further supports this assumption.⁶¹ In the next two chapters we will try to carefully re-read what the texts may reveal about Anaximander's ἄπειρον. But before that, two other and much neglected issues regarding the use and meaning of the word ἄπειρος will consume our attention.

There is a legitimate and interpretatively significant question whether Anaximander made τό, the article in the neuter gender, precede the adjective ἄπειρον, turning it into a noun.⁶² Similarly, neither is it attested by either Homer or Hesiod, nor in any direct fragments of thinkers of the archaic period. In the works of the Eleatic philosophers, in particular Zeno and Melissus, though, the issue of infinity plays a crucial role: the word ἄπειρον appears only as a predicate, for

⁵⁷Aetius, *Plac.* I.3.3 = DK 12A14 = Gr Axr18 = TP2 Ar53 = Eusebius, *Praep. evan.* 14.14.2 = TP2 Ar103; cf. Stobaeus, *Anthol.* 1.1.29b = TP2 Ar143, see Dox 277.

⁵⁸DL II.1 = DK 12A1 = Gr Axr1 = TP2 Ar92. Translation slightly adapted.

⁵⁹Simplicius, *In Arist. Phys.* 9.149.15–17 = TP2 Ar168, not in DK and Gr; our translation.

⁶⁰Cf. DL II.2 = DK 12A1 = Gr Axr1 = TP Ar92.

⁶¹Cf. Blanck (1997).

⁶²It would be interesting to consider in this context the use of the article in archaic Greek in general, as, for instance, in Snell (1955, Chap. 12, 299 ff). Here, however, we confine ourselves to the question whether Anaximander did use ἄπειρον only as a predicate and not in the substantive form τὸ ἄπειρον.

example, in describing ‘boundless things’, ἄπειρα τὰ ὄντα, or when speaking about what there is.⁶³ It is also noteworthy that the term τὸ ἄπειρον does not appear in Melissus’ fragments but only in Simplicius’ paraphrases of them.

In the fragments of Philolaus of Croton in the second half of the fifth century BC, we find the following pair in plural: ἄπειρα – περαίνοντα, ‘unlimiteds and limiters’.⁶⁴ The pair τὸ ἄπειρον – τὸ πέρας in singular, on the other hand, is attested only in much later writings by Aetius.⁶⁵ The first pair of the ten alleged ἀρχαί, which Aristotle ascribes to the Pythagoreans, reads: πέρας καὶ ἄπειρον.⁶⁶ Even though in both cases the articles are missing, the words are clearly used here as nouns. It is only later that Plato, especially in his *Philebus*, starts to ordinarily use the term τὸ ἄπειρον to express ‘the boundless’ (or infinity) as such. Aristotle, who himself uses τὸ ἄπειρον in this substantivized form, frequently claims that only the Pythagoreans and Plato believed the boundless to be a substance.⁶⁷ We may understand this to mean that the Pythagoreans and Plato used the substantive form of the original adjective ἄπειρος. It is worth noting that all three held the word ‘infinity’ to carry a negative undertone, associated with imperfection: the Pythagoreans put it at the head of the list of negative ἀρχαί; Plato maintained that the infinity of individuals or numbers created infinite ignorance (or indefinite thought);⁶⁸ and for Aristotle the infinite was always potential, never actual.⁶⁹ In this connection, Lebedev rightly wonders whether it is likely that this abstract term, which appears for the first time in the work of Plato, was ever used by Anaximander in the archaic period.⁷⁰

The formation of nouns in general is related to the issue of independent qualities treated independently of particular things. In this regard, Cherniss notes that not until Plato’s time were qualities known as such. Instead, they were seen as inseparable characteristics of particular things, as in the case of τὸ θερμὸν, which does not mean ‘heat’ in the sense of a separable quality but rather denotes a particular thing that is warm.⁷¹ In this context, Guthrie refers to a passage from Plato’s *Theaetetus* (182a–b) where substance (e.g., ‘warmth’) and attribute (e.g., ‘warm’) are clearly distinguished, but in which the unusual nature of the term

⁶³See, e.g., Simplicius, *In Arist. Phys.* 9.140.34 = DK 29B1 = Gr Zno7; 9.140.27 = DK 29B3 = Gr Zno13; 9.29.22–26; 9.109.20–25 = DK 30B2 = Gr Mls10; 9.109.31 = DK 30B3 = Gr Mls11; 9.110.3 = DK 30B4 = Gr Mls12; 9.111.18 = DK 30B7 = Gr Mls15; Simplicius, *In Arist. De caelo* 7.557.16 = DK 30B6 = Gr Mls14.

⁶⁴See DL VIII.85 = DK 44B1 = Gr Phs7; Stobaeus, *Anthol.* 1.21.7a = DK44B 2 = Gr Phs8; 1.21.7d = DK44B6 = Gr Phs11.

⁶⁵Cf. Aetius, *Plac.* I.3.10 = DK 44A9 = Gr Phs9.

⁶⁶Cf. Aristotle, *Met.* 986a24 = DK 58B5, not in Gr.

⁶⁷Cf. Aristotle, *Phys.* 203a3–18.

⁶⁸Cf. Plato, *Philb.* 17e3–5.

⁶⁹Cf. Aristotle, *Phys.* 207a21–23.

⁷⁰Cf. Lebedev (1978, I, 43–44).

⁷¹Cherniss (1951, 325).

ποιότης, ‘property’, ‘quality’ or literally ‘howness’ and its use in a general sense is also commented upon.⁷²

Quite another interpretative possibility comes into play when we take into consideration another word ἄπειρος (the negation of πείρα, ‘trial’, ‘attempt’), meaning ‘inexperienced’, but also ‘not acquainted with’ (ἐν πείρᾳ γίγνεσθαι means ‘to be acquainted with’) or ‘ignorant’.⁷³ Tannery⁷⁴ is the first modern scholar who suggest that Anaximander may have used it in its passive form, meaning ‘that which is not experienced’, ‘not sensible’, or even ‘that which cannot be experienced’. The passive form of this ἄπειρος is not documented elsewhere in the literature but is grammatically correct. We could render this passive use of ἄπειρος by the unusual but also grammatically correct term ‘unexperienced’. Drozdek notes this etymology but misses Tannery’s point that its *passive* meaning could be important for the interpretation of Anaximander’s use of ἄπειρος.⁷⁵ Tannery points to its twin ἀπείρατος, for which the passive use is documented. He suggests that the passive meaning of ἄπειρος was no longer understood since Melissus argued for the idea of infinity.⁷⁶

Apparently independently, Tumarkin suggests something similar in advocating this meaning for Anaximenes’ air as well, as a “nähere Bestimmung des ‘Unerfahrbaren’ (ἄπειρον) als das nicht Wahrnehmbare”.⁷⁷ She points not only to other words formed with α-, such as ἄτεχνος (“wo die Kunst fehlt, kunstlos”), but also to the opposite of ἄπειρος, ἔμπειρος (“erprobt, geschickt behandelt”) and to ἔντεχνος (“kunstvoll”).⁷⁸ Tumarkin suggests that in this meaning the word is used in the neuter, ἄπειρον, but this is a needless limitation.⁷⁹ In his Inaugural-Dissertation, Lumpe, following a hint from Egermann, proposes this translation in connection with Xenophanes.⁸⁰

We would suggest that the Presocratic cosmologists, who did not yet use the word ἄπειρος in the technical sense of ‘infinite’ (which became its exclusive meaning in the thinking of the Pythagoreans, Plato and Aristotle), still retained both meanings in their usage of it.⁸¹ To amend Kahn’s words: this is perhaps because most commentators were so fascinated by the concept of *das Unendliche* as the source of all that exists that they never seriously considered the possibility that when the ancient Greeks used the word ἄπειρος the notion of ‘unexperienced’

⁷²Cf. Guthrie (1985, 79). See also Lebedev (1978, I, 44–45).

⁷³Cf. LSJ, lemmata ἄπειρος and πείρα.

⁷⁴Tannery (1904).

⁷⁵Cf. Drozdek (2008, 19).

⁷⁶Tannery (1904, 707).

⁷⁷Tumarkin (1943, 56–8).

⁷⁸Tumarkin (1943, 56, n. 1).

⁷⁹Tumarkin (1943, 56).

⁸⁰Lumpe (1952, 38).

⁸¹Tannery (1904, 704) even suggests that the two words might have the same root, although he admits it is less probable.

played a background role.⁸² One might even say that after all there is not so much difference in meaning between the two homonymic words ἄπειρος. That which is boundless or infinite is, as such, beyond our experience.

Actually, without noticing it, for several scholars the notion of ἄπειρος as ‘unexperienced’ or ‘beyond our experience’ is part of the interpretation of ἄπειρος as ‘the boundless’. Tannery observes that it fits well with the interpretation of Anaximander’s principle of that which is ‘indeterminate’ (ἀόριστος),⁸³ as given in Simplicius’ commentary:

Anaximenes, son of Eurystratus, of Miletus, was an associate of Anaximander, who says, like him, that the underlying nature is single and boundless, but not indeterminate (ἀόριστος) as he says, but determinate.⁸⁴

And elsewhere, quoting Theophrastus:

And if anyone supposes the mixture of all things to be a single nature indefinite (ἀόριστος) in both kind and size (...) just like Anaximander (...) ⁸⁵

In Kahn’s recent rendering of ‘boundless’ as ‘what cannot be passed through to the end’, he actually means that it is *beyond the capacities* of mortals, but not beyond those of gods like Hera.⁸⁶ Obviously, Kahn searches for a rendition of the word ‘boundless’ without the mathematical connotations of ‘infinite’. His definition ‘what cannot be passed through the end because it is beyond the capacities of mortal beings’ is not too far away from ‘what is beyond our experience’. In Kahn’s still influential interpretation, the conception of the ἄπειρον “as the great cosmic mass encircling the spherical body of the star-studded heaven”, is typically something ‘unexperienced’.⁸⁷ Accordingly, Kahn calls it “some more permanent source that is *partially or wholly unknown to us*” and “this *unknown* world source”.⁸⁸ What the insertion of ‘partially’ before ‘wholly unknown’ means is not clear to us, for this alleged body or mass surrounding the world is as much beyond our experience as are the infinite worlds of the atomists. Another example is West: “earth, sea, sky, and Tartarus (...) Anaximander says that they have their sources in a boundless *Beyond*”.⁸⁹ Yet another example comes from Freeman, who writes: “for though the Non-Limited was material and therefore perceptible, *it was removed from our perceptions by being out of reach*”.⁹⁰ Recently, Graham has explicitly noted: “the boundless remains outside the cosmos, surrounding and controlling it in some fashion, but it is not, so far as Anaximander tells us, in our world. It is forever

⁸²Cf. Kahn (1994, 168).

⁸³Tannery (1904, 706–7).

⁸⁴Simplicius, *In Arist. Phys.* 9.24.13–25.1 = DK 13A5 = Gr Axs3 = TP2 Ar163.

⁸⁵Simplicius, *In Arist. Phys.* 9.154.14–23 = DK 12A9a = Gr Axr15 = TP2 Ar170.

⁸⁶Kahn (1994, 232) (our italics).

⁸⁷Kahn (1994, 234).

⁸⁸Kahn (1994, 237), our italics.

⁸⁹West (1971, 78 and 79).

⁹⁰Freeman (1966, 56), our italics.

inaccessible and mysterious, beyond empirical scrutiny".⁹¹ It should be noted that although these authors do not even mention that there are two different words ἄπειρος, they nevertheless interpret 'boundless' as 'beyond our experience'. These examples could be multiplied easily by quoting other authors on Anaximander's ἄπειρον.

⁹¹Graham (2006, 31 and 34), our italics.

Apeiron

Anaximander on Generation and Destruction

Kočandrle, R.; Couprie, D.L.

2017, XIII, 112 p., Softcover

ISBN: 978-3-319-49753-2