

The Emergence of the Concept in Early Greek Philosophy

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Grasp of a concept is mastery of the use of a word, so concepts are acquired in the process of learning a language. (Robert B. Brandom, *Tales of the Mighty Deads*, p. 360)

Every science, every art, every profession, in the act of forming its terminology, leaves its traces on the words of the common language. (Michel Bréal, *Essai de sémantique*, p. 286)

From Plato's *Meno* and its theory of reminiscence onwards, the question of how general representations or concepts develop in our minds (or for that matter are there from the start) became a recurrent issue in the philosophical discussion, about which we are reasonably well informed. The matter is different with pre-Platonic thinkers. While we know something about the way in which they explained sensation (*aisthēsis*) and even, to some limited extent, how they conceived of thought and its relationship to the senses,¹ we have no straightforward information, if any, about the origin and function of concepts. This absence is not accidental. It reflects the fact that with very few exceptions (Parmenides, indirectly; Democritus,

* Emily L. Hulme, during her time at Princeton University, revised the language of my first draft. Many thanks to her, to James Allen, who also read an earlier version of the text, and to the external readers and the editors of the volume for further corrections and suggestions.

¹ *Aisthēsis* and related terms may refer in Greek to the faculty, its instantiation, to perception, and even more generally grasping. The terminology had to be fixed. In a revealing passage, Empedocles uses the word *palamē* (litt. palm of the hand) in the sense of 'resource' to cover vision, hearing, and the senses for which he has not yet a technical name; the activity of 'thinking' is not separated from the that of the 'limbs': 'But come, consider with every resource in what way each thing is evident/Without holding some vision in greater trust than what accords with hearing/Nor a resonating sound as superior to the clarities of the tongue/And from none of the other limbs, in whatever it provides a path for thought/Withhold your trust, but think in whatever way each thing is evident' (31B3.10–13 DK = D44LM). Democritus is reported to have recognised more than the five senses distinguished by Aristotle (who of course also knows of a 'common sense'), for non-rational animals, sages and gods have also 'sensations' of their own, and one should not be misled by the number of sensibles: see Aëtius 4.10. 4–5 (Mansfeld and Runia 2020: vol. 4, 1583 and 1587–88).

possibly; and Socrates, of course²), none of the early Greek thinkers had any proper concept of what a 'concept' is. Whether it is possible or not to acquire the concepts of a cat or of greenness by noticing green things or seeing cats was consequently not their concern. The term *eidōs*, which, in appropriate contexts, would later be used in the sense of 'genus' or 'species', initially applied, like *morphē* and *idea*, both translated as 'form', to an objective feature of a given object (its external shape), while *genos*, which was to become the technical term for 'genus', meant 'family' or 'tribe'. Socrates' attempt at unifying a multiplicity of items under a single 'form' or species (*eidōs*) set up for the first time the conceptual framework within which questions about concepts and their origin could be explicitly raised.

Under those circumstances, questions about concepts in early Greek thought must be treated somewhat indirectly. I shall do so in three steps. Section 1 bears on the general features of early explanations of sensory mechanisms, highlighting the few texts in which later concerns may in some way be foreshadowed; in Section 2, I examine how early Greek thinkers conceived of the relationship between thought and the senses in general.³ In Section 3, I modify the perspective and shift from the question of concept formation to that of the origin of language. This move is justified by the fact that concepts are in fact not separable from the words that name them; moreover, there are some advantages to broaching the question in this way: first, contrary to the question of concept formation, we do know something about early views concerning language and its origin. Second, the general framework in which at least some of these views and theories are embedded, namely the story of the development of human culture, provides an interesting alternative to the post-Platonic way of dealing with concepts. Tackling the question within the broader framework of a theory of language amounts to replacing a specific, dated epistemological approach⁴ with a perspective that can be dubbed 'phylogenetic': not because it asks how general concepts developed in human brains in the long history of the *homo sapiens*, but because it

² For Parmenides, see p. 31; for Democritus, p. 19f. and n. 13.

³ These two sections make free use of paragraphs featuring in Laks 1999.

⁴ Brandom 1994: 614–23, provides a synthetic exposition of the distinction between concepts as representations and concepts as a function of judgement and shows why it was impossible to '[make] intelligible the possibility of acquiring concepts [...] within the framework of pre-Kantian rationalism' (cf. also Brandom 2002: 30f.). This last book is a far-reaching treatment of this classical problem and an original reconstruction of its long history, with Kant as a dividing line opening the way to a functional interpretation of what a concept is.

considers how concepts that were foundational for the whole subsequent history of philosophy – for instance, the very concept of concept – emerged amidst the particular community of early Greek thinkers – a tribe of sorts.⁵

I Looking for Inklings

Early explanations about how sensations come about, especially those concerning vision – arguably the most important of all the senses next to hearing as far as cognition is concerned – are stories about transportation, going through, and reaching. The distance between the perceived object and the organ of perception must be abolished.

Our main source about this topic, apart from a few original fragments, is Theophrastus' doxographical and critical exposition *On Sensations*.⁶ Common to all theories is the idea that it is not the object itself but rather something representative of the object that penetrates the eye. The classical scheme is that of Empedocles' 'emanations' (*aporroiaí*), which may go back to Parmenides, if indeed he spoke of an 'adaptation' of the visible object to the 'passages' of the eyes.⁷ It is significant that Democritus' *eidōla* ('images' flowing from the atomic compounds) could also be referred to as 'emanations'. One particularity of Democritus' theory, on which Theophrastus insists at length (Theophr., *Sens.* 50–53), is that what penetrates the eye is not the images of the perceived object, but 'imprints' (*tupoí*) impressed upon the intermediary air by images coming from the object, its environment, and perceiving individual (Theophr., *Sens.* 51). The rationale for adopting this intricate scheme must have been that it facilitated explanation of perceptual deformations and perhaps the perception of distances as well. But what is especially relevant in our context is that the word *tupos* (outline, imprint) implies that what reaches the perceiving subject is right away an 'outline', that is, a general shape or 'form'. As far as transportation is concerned, we don't know what Anaxagoras' and Diogenes of Apollonia's views may have been. But for the image of the object to appear or to be reflected on the pupil (the phenomenon of *emphasis*), as Anaxagoras among others assumed (Theophr., *Sens.* 27, cf. 36), or for that

⁵ This is the meaning of Bréal's 1913 claim translated in the epigraph, p. 6.

⁶ Theophrastus, *On Sensations*. Greek text in Diels 1879; complete English translation in Stratton 1917. K. Ierodiakonou is preparing a new edition and translation. Baltussen 2000 provides a detailed analysis of the treatise, on which see now the essays in Ierodiakonou 2019.

⁷ Theophr., *Sens.* 3, which must be the source of Aëtius 4.9.6. For a discussion of these passages, see Laks 1990, esp. 14–18.

image on the eye to ‘mingle’ with internal air in order that perception occur, according to Diogenes’ view (Theophr., *Sens.* 40), some kind of physical transportation must have taken place. Theophrastus himself struggled with the problem, within the changed framework of Aristotle’s discussion of sensation.⁸

The counterpart of this focus on emanations is the attention paid to ‘passages’ (called *poroi*, i.e., ‘paths’, by Empedocles). There are many of these in the human body. In the first place, there are the passages constitutive of some sense-organs such as ears and nostrils.⁹ As for the eye, Empedocles describes how ‘passages’ of fire and earth alternate at the surface of the eye so that they can receive what is shining and what is dark (Theophr., *Sens.* 7). Democritus invokes ‘suppleness’ and ‘vacuity’ to explain how the ‘image’ penetrates inside the eye (Theophr., *Sens.* 50 and 54); Alcmaeon (perhaps) and Clidemus mention its ‘diaphanous’ nature (Theophr., *Sens.*, 26 and 38). Beyond the eye, the way must be clear, the channel pierced in a straight line, free of greasy matter or blood (Democritus, Theophr., *Sens.* 50, cf. 55–56; Diogenes, Theophr., *Sens.* 40).

This explanatory apparatus could have led to a discussion of how concepts arise, in direct continuity with the explanation of sensation for which it was meant. Indeed Epicurus, one of the most important supporters of an empiricist theory of concept formation, was to rely on it one and a half centuries later.¹⁰ It is all the more striking that early Greek philosophers do not seem to have pursued the issue, as far as we can tell. Democritus’ take on the matter may be typical in this respect. Aristotle’s testimony stating that Democritus

says that it is clear to everyone what kind of thing a man is with regard to his form (*morphē*), on the idea that he is recognisable by his shape and colour. (Arist., *Part. an.* 1.1 640b31–33)¹¹

is confirmed by a possibly original quote preserved in Sextus Empiricus:

Democritus [...] tried to explain the notion (*epinoia*) [sc. of man] [...] by saying, ‘a man is what we all know.’ (Sext. Emp., *M* 7.265; cf. 68B165 DK = D26 LM)

⁸ Cf. Laks 2019. ⁹ See the quote above, n. 1.

¹⁰ On concept formation according to Epicurus, cf. the explanations Diogenes Laertius 10.33 gives about Epicurus’ technical term *prolēpsis*. See the contribution in this volume by Betegh and Tsouna.

¹¹ Translations of Aristotle are taken from the Revised Oxford Translation (ROT); for pre-Socratic authors I am using Laks-Most 2016 (with occasional minor modifications).

This appeal to common experience would, of course, be congruent with the idea, previously mentioned, that what we get from the object when we perceive it is its *tupos*, the imprint of its shape.¹²

The richest evidence concerning the path from sensation to concept, however, is not to be found in authors usually classified as ‘natural philosophers’, but in the medical corpus.

A passage from Socrates’ so-called intellectual autobiography in Plato’s *Phaedo* provides here the starting point. Socrates explains there that he had been concerned in his youth with a kind of investigation called ‘inquiry on nature’ (*peri phuseōs historia*) and mentions questions touching on the nature of thought, among others:

Is it the blood, or air, or fire by which we think (*phronein*)?¹³ Or is it none of these, and does the brain furnish the sensations of hearing and sight and smell, and is it from memory (*mnēmē*) and opinion (*doxa*) when it acquires stability (*labein to herēmein*) that knowledge (*epistēmē*) comes about? (Plat., *Phd.* 96b3–8, trans. Fowler, modified in the last sentence)

The passage is typical of the situation evoked in my introduction, since it does not refer to the notion of ‘concept’ or ‘form’ (*eidōs*) in its enumeration of the stages of knowledge acquisition but goes directly from ‘memory’ to ‘opinion’. Two reasons make it relevant for our question: first, the trajectory it describes – from sensation to memory, from memory to opinion, from opinion to knowledge – bears a certain resemblance with Aristotle’s account of concept formation;¹⁴ moreover, while the talk of ‘stabilisation’ is not equivalent to the notion of ‘generalisation’ and applies to opinion, that is, a stage that, according to the classical scheme, is epistemologically later than the concept, it may be seen as an important step towards the issue of concept formation to the extent that concepts too are characterised by a degree of stability that sensations do not possess.¹⁵ In order to play their identifying role, concepts must themselves be settled (i.e., stable).

¹² Aristotle would also recognise in Democritus inklings about the arguably related issue of definition. Cf. *Arist., Part. an.*, 1.1 642a25–27: ‘Democritus was the first to approach the question of what a thing is and the definition of its essence’ and *Metaph.* M.4 1078b19–21: ‘Among the natural philosophers, Democritus approached the question [sc. of definition] only to a small extent and defined in a certain way hot and cold.’

¹³ *phronein*, as many other psychological or cognitive terms, is hence difficult to translate accurately or always in the same way. It often includes feelings and emotions, thoughts, as well as more abstract thinking.

¹⁴ See, in particular, the notoriously difficult passage in Aristotle’s *An. post.*, 2.19, 100a3–b5. See McKirahan in this volume.

¹⁵ On the notion of stabilisation, see the Hippocratic treatise *The Sacred Disease*, 17: ‘When the brain is abnormally moist, of necessity it moves, and when it moves neither sight nor hearing are still, but

Can we tell whom Plato is referring to in the passage just quoted? Blood as the organ of thinking clearly refers to Empedocles, air to Diogenes of Apollonia, fire to the Atomists, and brain to Alcmaeon, as we know from several other sources, either original fragments or doxographical reports.¹⁶ But what about the process of ‘stabilisation’ and its different stages, from sensation to opinion? One would think that the question ‘... and is it from memory and opinion, when it acquires stability, that knowledge comes about?’, which shows no sign of shifting from the preceding one (‘does the brain furnish the sensations of hearing and sight and smell?’) is still reporting Alcmaeon’s view (as a matter of fact, the second part of the question is closely linked to the first by the words ‘and it is from these...’), but few interpreters seem to have considered this option. One reason for this, apart from the absence of explicit testimonies about Alcmaeon similar to those that are available for the first part of the sentence, might be a passage from the opening chapter of Aristotle’s *Metaphysics*:

From memory (*mnēmē*) experience (*empeiria*) is produced in men; for many memories of the same thing produce finally the capacity for a single experience. And the experience seems to be almost similar to knowledge (*epistēmē*) and art (*tekhnē*), but really knowledge and art come to men through experience. (Arist., *Metaph.* A.1 980b28–981b3)

Aristotle speaks here in his own name (which is of course compatible with his relying on somebody else’s views). But then comes a reference to Polus, a rhetorician otherwise mainly known as the second interlocutor of Socrates in Plato’s *Gorgias*:

For ‘experience made art’ as Polus said, speaking correctly, ‘but inexperience luck’. (Arist., *Metaph.* A.1 981b3–5)

Although Polus’ dictum about the relationship between experience and art is not likely to have referred to anything beyond the status of rhetoric (as opposed to the global, epistemological perspective which is that of Aristotle in the *Metaphysics* and of Plato in the *Phaedo*), the occurrence of his name at the beginning of Aristotle’s *Metaphysics* suggests that the second half of Plato’s sentence, which concerns memory, opinion and knowledge, reflects

we see or hear now one thing and now another, and the tongue speaks in accordance with the things seen and heard on any occasion. But all the time the brain is still a man is intelligent’ (trans. Jones, the last sentence is printed in DK in the chapter Alcmaeon under 24A11).

¹⁶ Empedocles: 31B105 DK (D240 LM); Diogenes: 64B4 DK (D9 LM); Atomists: 67A28, 68A101 and 104 DK (D130–D132 LM); Alcmaeon 24 A5 §26 DK (D19a LM).

an analysis of the epistemological process that was not on Alcmaeon's agenda.¹⁷

As a matter of fact, there are various problems about attributing to Alcmaeon the second part of Plato's sentence, apart from the fact that Plato might have translated in his own terminology Alcmaeon's wording.¹⁸

Consider first the idea that knowledge results from the stabilisation of opinion. It is true that according to Theophrastus, stability, a physical state, was for Alcmaeon a condition for the good functioning of the brain: Alcmaeon's argument for the dependence of sensations from the brain, as Theophrastus reports, was that sensations

are impaired when it [the brain] is altered or changes place. For this obstructs the passages which the sensations traverse. (Theophr., *Sens.* 26 (24A5 DK = D19LM))

But this physical stability of the brain is not the conceptual (or 'logical') stabilisation of a concept.¹⁹

There is a second, even more obvious problem, which is that Plato's sentence bears on the relationship between *doxa*, opinion, and *episteme*, knowledge, not on the relationship between sensation and concept. Is there any reason to think that Alcmaeon ever considered *this* correlation? Direct evidence is not available here. This is the point where the medical corpus comes into play.

Here is what we read in §16.1–4 of the Hippocratic treatise *On the Sacred Disease*, whose encephalocentric doctrine certainly draws on Alcmaeon's views.²⁰ (I italicise the words and sentences that are especially relevant for the present topic):

¹⁷ The chronology is uncertain, but Alcmaeon certainly belongs to an earlier generation than Polus.

¹⁸ Sassi 1978: 17. Lanza's 1964 thought that Plato's sentence could refer not to Alcmaeon, but to Anaxagoras on the basis of 59A21b DK, which suggests that Anaxagoras might have spoken of 'experience' and 'wisdom'. The context, however, is rather different and Lanza's proposal has not been taken up in the scholarly literature (see Sassi 1978: 15f.).

¹⁹ 'Logical stabilization, that is a process of abstraction and derivation of the universal from the particular [...] are] definitely beyond Alcmaeon's theoretical horizon' (Lo Presti 2009: 16). Cf. Theophrastus on Democritus: 'On the topic of thinking, he said no more than that it comes about when soul is balanced after movement but if someone gets over-heated or too cold, he says it changes' (Theophr., *Sens.* 58). This reflects the transmitted text, which has been defended by Sassi 1978: 187–90. It is often mis-corrected into: 'when soul is balanced after mixture (*krasis*).'

²⁰ As is well known, Alcmaeon doctrine was perceived, in a context where (natural) philosophy and medicine had acquired a disciplinary independence, as a mixed bag, cf. Diogenes Laertius 8.83 = D3 LM: 'For the most part, he speaks about medical matters; but all the same he also sometimes speaks about nature, saying, "most of the things involving humans are two."'

16 [1] It is for these reasons that I think that the brain is that part of human being that possesses the greatest power. For when it is healthy, it is this that is the *interpreter* [*hermeneus*, lit. the person that expresses or formulates] for us of what comes from the air. Now, air supplies it with thought; [2] by contrast, the eyes, ears, tongue, hands, and feet merely perform what the brain apprehends (*gignōskein*). For thought exists everywhere in the body to the degree that it has a share in air.²¹ [3] But with regard to understanding (*xynesis*), the brain is the *messenger* (*ho diaggellōn*). For when a human draws breath into himself, the air reaches his brain first, and in this way the air is diffused throughout the rest of the body, *after having left behind in the brain the best part of itself, i.e. what thinks* (*phronimon*) and possesses intelligence (*gnōmē*). [4] For if the air reached the body first and the brain afterwards, it would be *after having left behind discernment* (*kataleloipōs tēn diagnōsin*) in the flesh and vessels that it would arrive at the brain, in a hot and impure condition, mixed with the moisture coming from both the flesh and the blood, so that it would no longer be *precise* (*akribēs*). That is why I say that *the brain is the interpreter of understanding* (*ho hermeneuōn tēn xunesin*, lit. the one who expresses or formulates the understanding). [. . .] (trans. Laks-Most 2016[MED. T23, vol. 6, p. 358–61] with some modifications)

Although Alcmaeon's encephalocentrism is echoed in this passage, the details of the physiological explanation it develops are not likely to belong to him, if only because of the specific role played by air as the bearer of thought, which does not reflect his views.²² The semantical dimension of the physiological process is made clear by the emphatic use of the word *hermeneus* 'interpreter' and the corresponding verb *hermeneuein* at the beginning and at the end of the passage.²³ Thus, what the Hippocratic

²¹ Jouanna 2003 suggested that 'motion' should be read instead of 'thought' (cf. Laks-Most 2016: vol. vi, MED.T23, p. 358). The transmitted text, however, is fine (cf. Pigeaud 1980: 418 and Lo Presti 2010: 150f., who translates: 'for throughout the body there is a degree of consciousness proportionate to the amount of air which it receives'). For the Hippocratic doctor as for Diogenes of Apollonia, 'apprehension' (*noōsis*) is distributed throughout the body. Pigeaud and Lo Presti also keeps the better attested *prēssousi* ('perform') instead of *huperētousi* ('are the servants of') as Jouanna and LM.

²² The whole passage is printed by Diels-Kranz in the section 'Influence' (Nachwirkung) of the chapter devoted to Diogenes Apollonia (64C3a DK); only one sentence about the central role of the brain features among the testimonies about Alcmaeon's doctrines (24A11 DK).

²³ The expressive function of the brain as an 'interpreter' is complemented by its function as a transmitter ('the messenger'). Cf. Lo Presti 2010: 172: 'In the encephalocentric doctrine, the *enkephalos-hermeneus* does not merely fulfil a function of reception and transmission of "contents" of knowledge somehow provided by the air. What is performed by the brain is [. . .] a *morphogenesis* of sense, which implies ruptures of continuity and the formation of a system of differentiated and reciprocally alternating shapes both on a physiological and on a semantic level'. Lo Presti builds on Pigeaud 1980: 421 ('le cerveau est l'instrument du passage du signifiant au signifié' cf. p. 155) for the semantical import of the passage and Most 1986 for the meaning of *hermeneus* in its first known occurrence in Pindar, *Ol.* 2.83–86.

author is presenting us with is a genuine episode of how meaning comes about. This has arguably something to do with the question of concept formation.

What does the episode exactly imply? It is certainly true that what the Hippocratic author is describing is a process which, given certain physiological conditions, results in the deposit (cf. *kataleloipōs*) in the brain of a special, very 'exquisite' portion of inhaled air (cf. the striking use of the word *akmē* in this context to signify 'the best of'²⁴), the one that, because it 'thinks and possesses intelligence', is endowed with a capacity of discernment (*diagnōsis*) – a function which is, if not identical with, at least akin to that of a concept. The physiological conditions for that deposit to remain within the brain (as an 'intelligent', stable concept should) are specified: contrary to the heart and the diaphragm (*phrenes*), which are not hollow, the brain, whose structure is somewhat moist²⁵ but above all porous, also presents a cavity capable of retaining the air in question. A process of purification is taking place²⁶ – a purification that, in the light of the implications of the word *hermeneus*, can be eventually mapped onto the passage from 'concrete' to 'abstract'. This being said, it is difficult to claim that the author of the *On the Sacred Disease* has really explained how concepts *originate*. This is because the item whose formation the process is supposed to explain is already present in the stuff submitted to purification. If anything, what the medical author could be said to remotely anticipate is the Aristotelian view of concept formation as the stabilisation of a form received without the matter as described in *An. post.* 2.19. On the other hand, the absence of any distinction between form and matter makes it that there is a paradoxically 'innatist' side to his physiological explanation.²⁷

2 Sensation and Thought

Whereas the texts I have looked at thus far may be, with all due caution, connected with later concerns about concept formation, they remain exceptional within the corpus of early Greek thinkers. The situation is somewhat better when it comes, generally speaking, to the relationship between sensation with thought (and thoughts).

²⁴ Rather than 'the strength' (cf. 'la force', Pigeaud 1980: 418f.), which is certainly a possible rendering in some contexts (cf. LSJ, s.v., II), but probably less appropriate (as well as less interesting) here.

²⁵ *The Sacred Disease*, 17.

²⁶ Pigeaud 1980: 419, adequately compares the brain as conceived by the Hippocratic writer to a filter.

²⁷ Thanks to the reader who pressed me on my use of the term 'innatism.'

In his treatise *On the Soul*, Aristotle claims that the Ancients (*hoi arkhaioi*) took sensation and thought to be identical (*De an.* 3.3 427a21–22). The same verdict appears in *Metaphysics* Γ.5, 1009b12–15, where Aristotle names Empedocles, Democritus, and ‘so to speak every other’, before adducing evidence taken from Empedocles, Parmenides, Anaxagoras, and an anonymous body of thinkers who took a line from Homer as support for their view.²⁸ This is philosophical polemic. Neither the lines of Parmenides nor those of Empedocles and much less Anaxagoras’ apothegm, which Aristotle quotes, talk about sensation, but only about the variability of human thoughts, mental states and moods.²⁹ In insisting that the Ancients identified sensory perception and knowledge, Aristotle in *Metaphysics Gamma* follows a strategy that takes its inspirations from the first thesis examined in Plato’s *Theaetetus* (‘knowledge is perception’) and leads him far beyond what his evidence actually says.³⁰ This is confirmed by Theophrastus’ critical report *On Sensations* as well as by preserved original fragments. For while Theophrastus justifies to a certain extent Aristotle’s reading of Parmenides and Empedocles, he also distances himself from his sweeping generalisation about ‘the Ancients’.³¹ As a matter of fact, Theophrastus is quite keen, throughout his doxography, to draw attention to the presence of an explicit distinction between sensation on the one hand, and thought and knowledge on the other. Thus, he typically devotes a special section to ‘thought’, as in the cases of Empedocles (Theophr., *Sens.* 10), Diogenes of Apollonia (Theophr., *Sens.* 44), and Democritus (Theophr., *Sens.* 58); he praises Alcmaeon for having offered a criterion which makes

²⁸ The verse is not transmitted in Homer as we have it. For the data, see Cassin and Narcy 1989: 238.

²⁹ Parmenides 28B16 DK runs: ‘For as is at any moment the composition of the much-wandering limbs, /so mind (*noos*) is present to human beings; for them in each and all, that which thinks (*phroneei*) is the same thing, the substance of their limbs; for that of which there is more is thought (*noëma*).’ Empedocles 31B108 DK: ‘Insofar as they [= the elements] have changed in their nature, so far changed thoughts (*phronein*) present themselves to them;’ B106 DK: ‘for man’s wisdom (*mētis*) grows according to what is present.’ (Note that Aristotle could have found some support for his reading in B3.9–13, quoted above, n. 1). As for Anaxagoras, Aristotle quotes ‘one of the latter’s companions as ‘reporting a saying of his: that beings will be for them such as they suppose them to be.’ It looks as if Aristotle did not have anything more convincing at hand.

³⁰ Aristotle is clear in other passages that the distinction between sensation and thought was fundamental to some early thinkers at least – Parmenides to begin with. In the *Metaphysics*, he says that besides admitting a single principle ‘according to reason’, Parmenides acknowledges two principles ‘according to sensation’ (Arist., *Metaph.* A.5 986b32); and in *On Coming to Be and Passing Away*, obviously referring to the Eleatics, he writes that ‘some of the older philosophers . . . were led to transcend sense perception, and to disregard it on the ground that one ought to follow reason’ (*Gen. corr.* 1.8 325a13).

³¹ For more details on Theophrastus’ dealing with Parmenides and Empedocles, see Laks 1990.

it possible to distinguish animals, that possess only sensation, from human beings, who have both sensation and understanding (Theophr., *Sens.* 25). We also get a precious indication, albeit an indirect one, in the case of the little known Clidemus, who claimed that among the senses, ‘only the ears do not distinguish by themselves, but transmit to the mind (*nous*)’ (Theophr., *Sens.* 38).

Fragments of Parmenides and Democritus, to limit the evidence to these two, confirm that the view that intellectual cognition has distinctive characteristics was a current one. Parmenides, in the first part of his poem, construes ‘thinking’, in the restricted sense he gives to the term, by contrast with mortal, sensation-linked thoughts as they feature in the second part of the poem:

- This is the same: to think and the thought that ‘is.’
 35 For without what is, in which it [sc. thinking] is spoken,
 You will not find thinking. For nothing else <either> is or will be
 Besides what is, since Destiny has bound this
 To be whole and unmovable: it is in virtue of this [sc. of that which is] that all
 things have been named
 About which mortals have established, convinced that they are true,
 40 That they are born and are destroyed, are and are not,
 Change their place and modify their bright colour.³² (Parm., 28B8.34–41
 DK = D8.39–46 LM)

As for Democritus, he notoriously opposed two kinds of cognition (*gnōmē*), one that consists of ‘sight, hearing, smell, taste and touch’, and another one that is ‘separate from this’ (Democr., 68B11 DK), and in a famous passage employing personification he had the senses defying the mind:

Wretched mind (*phrēn*), do you take your assurances from us and then overthrow us? Our overthrow is your downfall. (Democr., 68B125 DK)

But whereas the distinction was available, it is more difficult to appreciate its scope, because what ‘thinking’ and ‘knowledge’ amounted to is itself a question.

³² Lines 38–40 are extremely difficult, due to both a textual and a syntactical problem which I cannot discuss in the present occasion. Two alternative translations of line 38, to begin with, are possible: ‘so that a name will be all the things’ and ‘to this [i.e. what is] all things will belong as a name;’ moreover, there are different possibilities to understand the relationship of line 38, whatever text and construal one adopts, with the two following line. But it seems clear that naming in Parmenides is the result of human conceptions and are as such the counterpart of their ‘concepts’, see below, p. 31f. and n.49.

It is appropriate to refer here to the so-called developmental view about cognitive theories and cognitive terminology in early Greek philosophy. There are, broadly speaking, two main components to this view³³:

- (a) Knowledge, in Homer, is on the whole ‘perceptual’, in the sense that it is ultimately intuitive.
- (b) In spite of the growing importance of ‘intellectual insight’ (here paraphrasing *nous*) as a means of access to ‘truth’, or of going beyond the appearances, the views of early Greek philosophers about thinking (and knowledge) remained heavily indebted to, and so to speak under the spell of, the Homeric model of intuitive knowledge.

Although or rather because this view does not claim that knowledge is equivalent to perceiving, but only that it is ultimately to be construed on the model of perceiving, it can be considered as the modern equivalent to the old Aristotelian claim about identity between perceiving and thinking in earlier philosophers. We might ask whether it is more promising than the latter.

The developmental view has been submitted to careful criticism by James Lesher, according to whom early Greek philosophers not only did not identify perceiving and thinking (the Aristotelian provocation in *Metaphysics* Γ.5), but did not even conceive of thinking on the model of perceiving (as the developmental view has it). Rather, thinking was conceived as being fundamentally *reflective* (in the sense of argumentative), a property not shared by sense perception.³⁴

The best evidence for this latter view is provided by Parmenides 28B8 DK, where the process of ‘thinking what is’ amounts to a series of inferential steps that Lesher has pointedly compared, among other passages, to Penelope’s recognition of Odysseus in Homer.³⁵ Identifying what is, and recognising Odysseus for who he is, are not questions of perceiving or quasi-perceiving, but of carefully testing signs and following the course of an argument.

Other texts are more difficult to deal with,³⁶ but support for a non-intuitive conception of knowledge and thinking could also be drawn from the cosmic or universal function that intellectual entities play in early Greek thought: Xenophanes’ and Anaxagoras’ ‘intellect’ (*nous*) or Diogenes’ ‘intelligence’ (*noēsis*) are more easily construed as organising,

³³ Of which Snell 1924 and von Fritz 1945/46 are the two main representative, see Lesher 1994: 3, n. 9. For further references to Snell and von Fritz contributions to the question, see Lesher 1994: 2, n. 4.

³⁴ Lesher 1994: 3–9. ³⁵ Homer, *Od.* 23.107–110; Lesher 1994: 24–30.

³⁶ Such as Heraclitus 22B93 DK and 22B101 DK.

deliberating, or structuring powers, than as intuitive capacities.³⁷ But caution is also in order. One should be wary not to fall into a mistake symmetrical to Aristotle's, and to resist the temptation to generalise from a relatively small body of evidence. Even the most suggestive testimonies in favour of the reflective, or, as one could call it, *dianoetic* conception of thinking, remain for the most part implicit. Drawing conclusions about what an author's views about thinking were from an actual bit of thinking (such as the argument of B8 in Parmenides' case) or from the role explicitly ascribed to it (as in the case of Anaxagoras's 'intellect' in 59B12 DK) is quite different from interpreting explicit statements about what thinking is. Moreover, there are reasons to doubt whether the *activity* of thinking was of any concern in the first place: it is significant that when Empedocles, for instance, says that thinking is blood, he identifies it with its location (31B105.3 DK = D240 LM), as if what thinking consists in, *its modus operandi*, was taken for granted. Thus, it could be the case that seemingly good candidates for a 'dianoetic' conception of thinking processes coexist with or, on more careful examination, rather turn out to fit the 'intuitive' or 'noetic' mould.

3 Concepts and Words

Concepts are tightly linked to words. Accordingly, the manner in which words come about or for that matter change their meaning represents an important aspect of an inquiry about the nature of concepts, to the point that it may even help resolve some of the puzzles raised by this latter.³⁸

A famous passage in Epicurus' *Letter to Herodotus* distinguishes two stages in the history of language formation, one natural, the other conventional. In a first, 'natural' stage, language consists in a series of sounds which are first produced by a combination of physiological and environmental factors and then get associated with a certain kind of objects; once language has been brought about by 'nature' in this way, 'experts' come into play by refining the meaning of existing terms and introducing new terms, in order to name new, non-perceptible realities.³⁹ Whereas the first stage relies on a mechanism that is, if not identical, at least analogous to the impact of an external object on a cognitive faculty which remains

³⁷ On this disputed issue of the status of Heraclitus's 'reason' (*logos*), see Bollack 1997 (English trans. 2016) and Laks 2018: 13–23.

³⁸ The relation between language and concept formation is at the centre of Stenzel's 1921 praise of Greek language (in Stenzel 1956: 72–73).

³⁹ Epic., *Ep. Hdt.* 75–76. The difficulties of the text do not affect what follows.

essentially passive, the second stage implies name-givers who are engaged in some kind of reflexive mental activity. The first moment of Epicurus' unified description is a specific, conceptually more complex and robust version of the pre-Platonic scheme we have met above, according to which perception is explained by the penetration of external entities into the body; here, the physiological process leads to an emission of sounds that constitutes the basis of an inchoate language. Since a famous article by K. Reinhardt, it is generally admitted that Epicurus took over the basic feature of his theory from Democritus' account of the origin of human language, as preserved in the history of cultural development presented in the first book of Diodorus of Sicily's *History*.⁴⁰ Here is the passage that echoes Epicurus's *Letter to Herodotus*:

though the sounds which they made were at first unintelligible and indistinct, yet gradually they came to give articulation to their speech, and by agreeing with one another upon symbols (*sumbola*) for each thing which presented itself to them, made known among themselves the significance which was to be attached to each term. (Diod. Sic., 1.8.3, trans. Oldfather)

A snippet coming from Democritus' original account might be preserved in a fragment stating that the notion of an all-controlling divinity (Zeus) was introduced by 'a few wise men'.⁴¹ In related conceptions, the 'few' could be reduced to one. Plato's talk in the *Cratylus* of an individual who 'coins names' (the *onomatourgos*), just as a lawgiver is an individual who posits laws (the *nomothētēs*),⁴² certainly reflects older views, although these are attested in drama rather than in the philosophical tradition. Aeschylus in his *Agamemnon* has the chorus ask about Helen's name:

Who was it that gave a name
so utterly appropriate –
perhaps a being we cannot see,
using language with accuracy
Through his foreknowledge of what was fated?
(Aeschylus, *Ag.* 682–87, trans. Sommerstein)

⁴⁰ Cf. Reinhardt 1912: 495–98. Reinhardt's thesis about Democritus being the source of Diodorus' *Kulturgeschichte* has been endorsed, with some modification, by Cole 1967 (cf. his Appendix 1). The book, which is mainly interested in the question of sources, is not really helpful for the problem discussed here (on language, cf. p. 67–69).

⁴¹ 'A few wise men (*logioi*), lifting their hands towards that place that we Greeks now call the air, <said>, "Zeus meditates on all things, and he knows all things, gives them, and takes them away, and he is the king of all things".' (68B30 = D210 LM. The text, which is quoted by Clement of Alexandria, *Protreptic*, 68.5, is in poor shape).

⁴² Cf. Plat., *Cra.*, 388c–389a.

Helen's name corresponds to her nature, which will be revealed by her story – she is 'the one who destroys (*helein*)', and which the name-giver's prophetic mind captures in advance. In the latter case, what is at stake is not language's first institution: rather, the unknown conceiver of Helen's name is using the resources of a pre-existing language to explain the name of a given individual. By contrast, what we find in Democritus or for that matter in Plato's *Cratylus* is the idea that giving a name to a certain item (whether an individual or a kind of things) coincides with a 'conceptual insight' into the true nature of the item in question.⁴³ This is in accordance with the ancient common assumption that the function of language is to name things and that names thus must reflect their true nature.⁴⁴

In Antiquity, the old 'onomathetic' view led later scholars and doxographers to look for the 'first inventor' (*prōtos heurētēs*) of a given name; and since the Presocratics came chronologically 'first', it is not surprising that some of them are said to be 'the first inventors' of certain philosophical concepts. Thus, according to a famous tradition (arguably the Platonic one, even though not everybody agrees that view), the words 'philosophy' (*philosophia*) and 'philosopher' (*philosophos*) themselves would have been coined by Pythagoras;⁴⁵ and Anaximander is famously reported – at least according to one reading of a notice that most probably goes back to Theophrastus – to have been the first to use the word 'principle' (*arkhē*) – which must mean, given that the word itself was already current in Homer, that he was the first to give it the sense of 'principle', as opposed to its traditional meanings, 'beginning' or 'power'.⁴⁶ Of course, the notion of a 'first inventor' means no more, in a number of cases, than the mythical projection of a collective finding onto a single individual.⁴⁷ In this sense, Parmenides' view has more plausibility, since he globally attributes to 'mortals' to have established the names by which they refer to the world that they inhabit. On the other hand, it is perfectly possible to imagine that a given individual, for example a philosophical author, in fact would

⁴³ A famous passage from the *Sisyphus*, a play attributed either to Critias or to Euripides, explains that the notion of divinity was devised by an especially clever and skillful individual (without explicit reference to naming, however) to control human behaviour through fear (88B25 DK = DRAM. T63 LM, v. 11ff.)

⁴⁴ These assumptions are fleshed out and criticised in Mourelatos 2008: 300–6 and Graeser 1999: 11–16.

⁴⁵ Diog. Laert., 1.12; cf. Cic., *Tusc.* 5.8–9 (10c PYTH.D9, 18 PYTHS. R29).

⁴⁶ Simpl., *in Phys.*, p. 24.13–16 (12A9 and B1 DK, D6 LM). According to another possible interpretation of the sentence, Anaximander was the first to have called the principle 'unlimited'.

⁴⁷ Kleingünther 1933.

have been partly or fully responsible for introducing a new word (coining a neologism) or for giving a new meaning to an existing word. Not only is the phenomenon common throughout the whole history of philosophy – philosophers typically introduce new concepts – but also it illustrates the dynamic that characterises the life of language in general. There are clear indications that early Greek thinkers were from very early on aware of this tension between current language and the concepts they were aiming to establish.

The solidarity between concepts and words is perhaps nowhere so obvious as in Parmenides' poem, although Parmenides links the treatment of 'words' (*onomata*) to the ontological error in which mortals are caught, but which the goddess whom he lets speak undertakes to keep under control. Mortals 'established' the names of all the entities that populate their world (the Greek verb, *tithēmi*, suggests decision rather than arbitrariness): in the first place, they named the two basic components (interestingly called 'forms', *morphai*) from which the rest derives by mixture, namely Night and Light:

For they have established two forms (*morphas*) to name their views.
(28B8.53 DK = D8.58 LM)

before naming all the constituents of the world:

In this way, according to opinion, these things have been born and now
they are,
And later, having grown strong, starting from that point they will come to
their end.
For these things, humans have established a name that designates each one.
(28B19 DK = D62 LM)⁴⁸

If these powerful lines constituted the closure of Parmenides' poem, as it is likely to be the case, we get a sense of how the entire world conceptually comes about for Parmenides with the words that name its constituents. The two basic constitutive 'forms' of the universe, Night and Light, at any rate, are the primary candidates for the title of 'concepts' deriving from the activity of human thoughts, given the precision with which their nature is

⁴⁸ Cf. some of the items in question are listed in 28B10 and B11 (earth, sun, moon, ether, Milky Way, the ultimate sky called Olympos); the list can of course be extended to all the components and aspects of the world that were explained in the second part of the goddess' exposition, the number of which could of course be in principle increased *ad libitum*. See also 28B834–41, quoted above, p. 26, which, at least on a certain reading of the lines, include ontologically problematic words such as 'to be born', 'to be' – when coupled with 'not to be' – or 'to change'.

determined through a series of opposite and mutually exclusive predicates in 28B8.54-59 DK = D8.59-64LM.⁴⁹

Data related to other early views about the relationship between words and meanings are scarce and require a fair amount of speculative reconstruction. But it also clearly results, with radically different implications, from the way in which Heraclitus points to the contradictions that are inherent in the words we use: one of his most famous fragments plays on the fact that the Greek word *bios* is the name both of life, and of the bow that causes death (22B48 DK = D53LM); another one states that

the wise thing, which is one, wants and does not want to be called Zeus.
(22B32 DK = D45LM)

Contrary to Heraclitus, whose radical position takes current language to be fundamentally ambiguous, and Parmenides, who suggests that its ontological shortcomings can be identified, kept under control and to this extent made acceptable, most other thinkers rather suggest that it needs to be locally corrected or reformed. Xenophanes had already declared that

What they [sc. humans] call Iris, this too by nature is cloud,
Purple, red and greenish to look on. (21B32 DK = D32 LM (cf. Anaxagoras
59B19 DK = D55 LM))

Empedocles, picking up on Parmenides, then writes:

Something else I will tell you: of nothing is there birth (*phusis*), among all
Mortal things, nor is there an ending coming from baleful death,
But only mixture and exchange of things mixed
Exist, and ‘birth’ is a name given by mortal humans. (31B8 DK = D53 LM)

And Anaxagoras, also on a Parmenidean line:

The Greeks do not conceive correctly either what it is to come to be or what
it is to be destroyed. For nothing comes to be or is destroyed; but rather,
out of things that are, there is mixing and separation. And so, to speak
correctly, they would have to call coming to be ‘mixing’ and being
destroyed ‘separating.’ (59B17 DK = D15 LM)⁵⁰

⁴⁹ Thanks to the external reader who insisted on my making this point. The question of the *legitimacy* of this conceptualisation is another matter; it is linked to the interpretation of the controversial line 28B54DK = D8.59LM (‘Of which the one they should not have named – in this they wander in error’), on which see Laks 2023.

⁵⁰ Cf. the Hippocratic treatise *On Regimen* 1.4: ‘Whenever I speak of “becoming” or “perishing” I am merely using popular expressions; what I really mean is “mingling” and “separating”’ (trans. Jones).

This trend of thought is likely to have been systematically developed by the sophists, such as Protagoras and Prodicus, who reflected in one way or another about the ‘correctness of names’.⁵¹

A stricter use of an existing word amounts to its re-conceptualisation. There is plenty of evidence from an early time on about how a number of existing words were redefined in order to serve philosophical purposes, some of them so successfully that they definitively entered the philosophical vocabulary, others without lasting effect. The latter case may be illustrated by the term *sēma*, ‘sign’, to refer to what we would call a ‘predicate’ (if this is the correct interpretation of its occurrence in Parmenides’s poem 28B8.2 = D8.7 LM), or by the Empedoclean *rhizōmata*, ‘roots’, which refers (of course with other implications, since the roots are divinities) to what will become the classical ‘elements’, *stoikheia*. On the side of the success story we find, besides *philosophia* (philosophy), *arkhē* (principle), or *stoikheion* (element), words such as *eidos* and *idea* (form), *psukhē* (soul), *kosmos* (world), *dikē* (justice), *anankē* (necessity), not to speak of *logos* (proportion, definition, argument). In all these cases, one can try to reconstruct, more or less speculatively, the history of why and how a word of common use and with concrete reference eventually became an abstract concept with philosophical, and not only philosophical future. Before starting its Platonic career, *idea*, for example, had already evolved from its original meaning, which is attested in Anaxagoras and in Democritus (where it refers to the shape of the ‘seeds’ or of the atoms), and was commonly used to mean ‘kind’ (as attested in the Hippocratic treatise *On Nature of Man* or in Thucydides).⁵² This in turn was what made possible the emergence of the Platonic *Form* and, subsequently, Aristotle’s distinction between the Platonic *idea* and his own *eidos* (‘species’), two words or concepts that were still tightly related in Plato.

The mechanisms at play in the process that led to the creation of a specialised vocabulary are various and more complex than in the case just mentioned. One can distinguish linguistic, cultural and intellectual factors. A linguistic factor whose importance has often been highlighted is the capacity of Greek language to express abstraction through substantivation,

⁵¹ Cf. Protagoras, D21–D25 LM; Prodicus, D5–D8 LM.

⁵² ‘Shape’: Democritus, 68B141 = D34LM; Anaxagoras, 59B4 = D13 LM; ‘kind’: *On Nature of Man* (many kinds of sickness), Thucydides, 1.109 (many kinds of war). Here is a sample of the many studies devoted to the semantic evolution of philosophical concepts: Bremmer 1983 (on *psukhē*), Diels 1899 (on *stoikheion*), cf. Burkert 1959; Kerschenshteiner 1962 (on *kosmos*), Gladigow 1965 (on *sophia*; cf. Bollack 1968), Schofield 1997 (on *arkhē*), Schreckenberg 1964 (on *anankē*), Wieland 1972 (on *khrōnos*). See also below, n. 55.

in particular by recurring to the article *to* (*to on*, [the] being; *to mē on*, [the] non-being; *to apeiron*, the unlimited).⁵³ Another factor is the possibility of deriving abstract substantive corresponding to a verbal action by suffixation in *-sis* (*noēsis* or *gnōsis*).⁵⁴

A major cultural factor, which was pinpointed by Havelock in a pioneering study, is the diffusion of writing and the decreasing importance of oral transmission in the very period where early Greek philosophy develops: the growing preponderance of the eye over the ear (in Havelock's formulation) made not only possible, but even desirable, the passage from concrete and heterogeneous notions embedded in singular stories to abstract and unified concepts.⁵⁵ At a more specific level, institutional conditions, professional communication, and argumentative practices were at work in the elaboration of new concepts and the coinage of new terms. These are difficult to reconstruct, if only because the data on which such explanations would have to build are extremely scanty. But the general point is that as far as concept formation is concerned, cultural and social factors – in a perspective that I have called 'phylogenetic' – are likely to have a greater explicative power than the 'ontogenetic' perspective which was to occupy the stage after Plato. Of course, Greek philosophers did not explore this path, neither in the pre-Platonic period, nor afterwards. They did not have at their disposal the powerful tools of modern socio-semantic analysis. When the time came (with Plato), they by and large concentrated on the 'ontogenetic' question. As for early thinkers, beyond the fact that what remains of their works provide interesting material to study the historical problem of concept formation from a 'phylogenetic' perspective, the very absence of this later concern highlights the importance of giving to language full attention when one deals with questions related to the notion of concept. This is not a negligible achievement, although it is an essentially negative one.

⁵³ Cf. Snell 1953: 227–34. From a modern perspective, the 'prolific use of the definite article "the" was also a source of confusion, blurring the 'distinction between singular abstract terms and general concrete terms' (Graeser 1999: 10). Interestingly, Stenzel 1956 interprets singular abstract concepts in the light of the corresponding verbs of action: 'Man darf sich durch die grammatische Form des "Guten" und "Gerechten" nicht beirren lassen. Alle die sogenannten ethischen Begriffe haben ihrer Struktur nach viel mehr Verwandtschaft mit dem Verbalen' (p. 81).

⁵⁴ Snell 1953: 234.

⁵⁵ Havelock 1983. In the section entitled 'The Act of Conceptual Analysis' (p. 28–41), Havelock reconstructs 'the deployment of linguistic counters identifying such categories as matter (*hulē*), dimension (*megethos*), space (*khōra*), body (*sōma*), void (*kenon*), motion (*kinēsis* or *phora*), change (*alloiōsis*, *metabolē*), and rest (*stasis*)' and notes that 'countless others could be named pertinent to the systems of individual philosophers of later antiquity' (p. 29). There are, as a matter of fact, many studies devoted to the emergence of philosophical terms. See above, n. 52.