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Citation for published version:
Scaltsas, T 2017, Αρχαία γνωσιοθεωρία. in G Karamanolis (ed.), Εισαγωγή στην Αρχαία Φιλοσοφία. Crete University Press, Crete, Greece. https://doi.org/20.500.11820/ed030f05-b2a5-440c-8bab-f4659bd8774e

Digital Object Identifier (DOI):
20.500.11820/ed030f05-b2a5-440c-8bab-f4659bd8774e

Link:
Link to publication record in Edinburgh Research Explorer

Document Version:
Peer reviewed version

Published In:
Εισαγωγή στην Αρχαία Φιλοσοφία

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Download date: 21. Sep. 2023

Ancient Epistemology

«Γνωσιοθεωρία»

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The primary difference between the way that the ancients thought about knowledge and the way we think about knowledge is that what is primary in our analysis of the concept of knowledge is the *justification* one has for believing what we know. The justification of the belief is the deciding factor as to whether something is knowledge or mere belief. But the ancients were *not* primarily concerned with the justification of our belief in accounting for knowledge. To understand how they thought about knowledge we need to think of it along the model of perception – the ancients thought they knew something if they discerned all about it clearly. The proposal being put forward here then is that the ancients thought they *knew* when they had a grasp of the *constitution* of the object of knowledge. I will call this the *constitutive conception of knowledge*, which I argue is the conception that characterises the ancients' approach to cognition.

A consequence of this conception of knowledge is that broadly speaking the ancients thought that we know *objects*, just as we perceive objects, and only secondarily we know facts or states of affairs, just as we secondarily perceive facts or states of affairs. The object of knowledge is an entity in the ontology, and knowledge of it reveals to the cognitive agent the constitution of the object as it really is.

Finally, although I talk about what the ancients thought about knowledge, I do not mean to suggest that there was total consensus among the ancients about the way they understood this faculty. Of course there were significant differences and alternatives in their analysis of our epistemic powers, but in so far as we now use the umbrella-conception of the justificational understanding of knowledge to talk collectively of different versions of the concept of knowledge in alternative contemporary epistemological accounts, similarly with the same degree of generality, I use the constitutional conception of knowledge as an umbrella conception in discussing the way the ancients explained knowledge.

Early Epistemology

The Presocratic philosopher who is recognised as the first epistemologist is Xenophanes of Colophon (c.565-c.470 BC). For him knowledge is of clear and certain truth (*to saphes*) (Diels and Kranz [hereafter DK] 21 B34). There is much controversy about Xenophanes' position on knowledge. Most commentators since antiquity agree that Xenophanes is a sceptic. He says in Fragment B34:

> And indeed no man has been, nor will there be,
> Who knows the clear and certain truth
> About the gods and such things as I say concerning all things
> For even if one were to succeed the most
> In speaking of what has been brought to pass
> Still he himself does not know [*ouk oide*] but opinion [*dokos*] is allotted to all.

The claim that no person has clear and certain truth about all things would seem to signal universal scepticism about knowledge. But Lesher (1999), 228-31, has argued convincingly

that Xenophanes' scepticism is not universal. He showed that Xenophanes does allow for knowledge through the senses, and that it is only knowledge about the gods and about universals that Xenophanes raises doubts regarding the possibility of knowledge.[1] An example Lesher offers is that of the rainbow, whose presence in the sky would be associated with the goddess Iris. Lesher directs us to Fragment B32:

> And she whom they call Iris, this too is by nature a cloud,
> Purple, red, and greenish-yellow to behold.

What is significant in this fragment is that Xenophanes displays trust in the senses for the attainment of knowledge about the nature of things around us, which are available for observation. This is not surprising for that time; for example, Herodotus held that knowledge, namely clear and certain grasp of truth, was based on direct observation (*History* II, 44).[2] But Xenophanes went further than that, holding that there was knowledge to be had about matters that were *not* available to observation. This is knowledge about the gods and the ordinances which govern nature.[3] But such knowledge is possible according to Xenophanes, even if not available to humans, as it is attainable by god, who has a holistic conception of the universe:

> ... whole he sees, whole he thinks, and whole he hears ... (B24)

This grasp of everything as a whole would include knowledge of the physical realm, of the divine realm, as well as of the domains of the abstract about these realms. So, Lesher concludes, Xenophanes is a sceptic, but not about everything; rather, he is a sceptic about the ability of humans to know what transcends perceptual experience.

Although Xenophanes alluded to extra-perceptual knowledge, which, even if not available to humans, is attainable by the divine power, it was Heracleitus that focused on the difference between perceptual knowledge on the one hand and knowledge of the workings of the cosmos that requires an understanding of the *sub*-surface structure.[4] In fact, he made the point vivid through scorn and irony by disparaging the polymaths of the Greek tradition in favour of the sophistication that he offered towards understanding the universe:

> The learning of many things does not teach wisdom [*noos*]; else it would have taught Hesiod and Pythagoras, and again Xenophanes and Hecataeus. (DK 22 Fragment B40)

Instead, Heracleitus urges people to listen to an objective account of how things are in reality:

> It is wise for those listening not to me but to the *logos* to agree that all things are one. (B50)

That all things are one is far from being given to perceptual observation, but requires reflection on the data given through perception, and rational analysis in order to conclude to the oneness of all things in the cosmos.

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[1] Lesher (1999).
[2] Lesher (1993).
[3] Lesher (1993).
[4] Lesher (1999).

The drive for deep knowledge rather than knowledge of the surface reaches its pinnacle with Parmenides of Elea (in the early decades of the 5th century BC). Parmenides thought that what is given in experience is deceptive and that it should be rejected as a false impression of what there is in reality. We perceive things as changing and this, Parmenides and his student Zeno of Elea (490 BC? – ca. 430 BC?) argued, leads to paradox. The truth is that reality is a whole which is eternal, indivisible and unchanging.

Parmenides presented his cosmology in a poem which divided into three parts: a Proem, which prefaces the whole work; 'The Way of Truth' (ἀλήθεια); and 'The Way of Opinion' (δόξα). The Way of Truth is an abstract exploration of the nature of reality through reason, by disbarring perception, which concludes that what exists and what we can think of is only 'what is', and not 'what is not':

> For this view, that that which is not exists, can never predominate. You must debar your thought from this way of search, nor let ordinary experience in its variety force you along this way, (namely, that of allowing) the eye, sightless as it is, and the ear, full of sound, and the tongue, to rule; but (you must) judge by means of the reason (logos) the much-contested proof which is expounded by me. (DK 28 B 7.1-8.2)

This marks a milestone in the explanation of the cosmos in so far as it dismisses the senses as a source of knowledge of what there is in nature and establishes reason as the only means for the discovery of the true nature of reality. The Way of Truth is urging us to dismiss perceptual evidence as revelatory of any aspect of reality. This means that only understanding can lead to knowledge. The understanding will be understanding of the nature of reality, of what is. As Sedley points out, the search in the Way of Truth is on the one hand for the subject of 'is', which 'is the final goal of the Way of Truth', and on the other for the meaning of 'is' (Sedley (1999), p. 114).[5] Regarding the latter, Sedley refers to the four interpretations received in the literature:

> ... what does "is" mean here? It has become traditional to offer a choice between at least the following: an existential or complete sense, ".. . exists"; a copulative or incomplete sense, " .. . is.. . "; a veridical sense, ".. . is the case" or perhaps ".. . really is... "; and a fused sense, combining some or all of these. (p. 114)

The fused sense derives from the sense of 'is' which Mourelatos had proposed in 1976, also present in his revised edition[6]: if *x* is *F*, then *F* denotes the 'characteristic nature, true identity, intrinsic reality, or essence' of *x* (p. 341). This is a sense of 'is' to which we will return when we examine Plato's account of knowledge, which I consider the primary development of the constitutive conception of knowledge.

Sedley argues that different passages in the Way of Truth require different senses of 'is', which is what we will also find to be the case in Plato's passage of the distinction between knowledge and opinion in *Republic* V. But the fact that there is this semantic fluidity in the use of 'is' gives support to the idea of the fused sense of it, which allows some of its connotations to be more predominant in some occurrences than in others.

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[5] Sedley, (1999).
[6] Mourelatos (2008).

In The Way of Opinion Parmenides offers an explanation of the conception of the world which is derived from the evidence of the senses. To capture the inherent contradiction in what is given through perception he describes it as a world of two powers, that of light and that of nights, which interpenetrate each other thoroughly:

> All is full of light, and obscure night together.
> Of both equally, since for neither is the case that nothing shares in them. (B9.3-4)

It is therefore the case that the world of perception is a world full of opposites, and as such a world of plurality, which is a misconception of the true nature of reality:

> The mortals lay down and decided well to name two forms (i.e. the flaming light and obscure darkness of night), out of which it is necessary not to make one, and in this they are led astray. (B 8.53-4)

Opposites invite what is not, which cannot be or be thought about. Hence, this picture of reality cannot be true, but is and illusory *appearance*. With it are rejected all previous accounts of the cosmos which had been offered by the early philosophers on the basis of perceptual evidence and the principle of opposing powers. In its place Parmenides offers an account of *reality* that describes the structure of pure being, devoid of becoming, opposition, and negation.

Lesher suggests an interpretation that goes against the received view about The Way of Opinion. He argues that certain descriptions in this part of the poem suggest that the narrator goddess is putting forward a plausible cosmology by contrast to the cosmologists that had been proposed by previous philosophers which would be the illusory pictures of reality leading people astray. Lesher thinks that there is indeed a distinction between the cognitive states generated by The Way of Truth and what the goddess describes in The Way of Opinion. The former describes what is 'an unshaking heart of very persuasive truth' (B1.29) which Lesher interprets as 'a restriction of the class of knowable propositions to necessarily true ones'.[7] While the latter offers 'a credible cosmology purged of the errors that have infected all previous mortal thinking, one fully consistent with the conception of "what is" set out in fragments B2 to B8'.[8] Mourelatos sees the Way of Opinion as a cosmology designed to bring out both similarities and contrasts with Parmenides' own doctrine of what-is.

Lesher makes an insightful comment on the nature of the cognitive investigation that Parmenides is conducting in his poem:

> We have some warrant, therefore, for regarding the distinction between the two phases of the goddess' instruction, with the attendant distinction between achieving "true trust" and mere "likelihood" or "plausibility," as an attempt to mark off two distinct forms of knowledge. Since the first of these is concerned with a set of propositions whose truth can be proven through the use of logical argument, while the second focuses on the nature of things we encounter through sense experience, Parmenides' account may be described in more modern terms as a pioneering attempt to distinguish a priori from empirical knowledge. (Lesher (1999), p. 241)

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[7] Lesher (1993).
[8] Lesher (1999), 240. Lesher finds support in Graham, D., 'Empedocles and Anaxagoras' p. 168, in the same volume for this view, and reports Sedley's different view in Sedley, D. (1999), p. 123.

Parmenides' impact on the course of philosophy is incalculable. He displayed through his philosophical work that methodical and rigorous thinking can reveal not only truths about reality, but truths that contravene the evidence of the senses. He argued that reason is a far more reliable instrument of discovery than observation. And he claimed that appearance is fundamentally different from reality, while the laws of nature reign over the phenomenal rather than the real.

Socrates' epistemology

The early Platonic dialogues show Socrates as being in search of definitions, primarily in the moral domain. Much has been written about Socratic definitions and in particular about whether Plato's Socrates believes he does offer successful definitions, therefore attaining knowledge of the corresponding moral concepts, or not, which would match his disavowals of knowledge. I will not here engage in an account of the literature on this[9] but only state my position, that I agree with S. Marc Cohen regarding Socratic definitions being about *entities*, not about words: 'Socratic definitions are not of words, but of things. Socrates does not want to know what the word 'justice' means, but what the nature of justice itself is. ... $X =_{df} ABC$ iff (1) all instances of X are instances of ABC, and all instances of ABC are instances of X, and (2) all instances of X are instances of X because they have characteristics ABC.'[10] Whether or not we assume that Socrates thought that he did possess examples of successful definitions, what follows from the realisation that he is seeking to define entities (in this case, abstract moral ones) shows that his definitions would give him knowledge of the *constitution* of these entities, of what these entities are and what makes them such.

The question of Socrates' disavowal of knowledge has been important since antiquity because of the role that Socrates has played in the history of scepticism, which, as we have seen, is thought to have begun with Xenophanes, and flourished especially during the Hellenistic era.[11] Gregory Vlastos has proposed a position that aims to pay justice to both sets of texts in Plato's works, those that show Socrates to be saying that he has no knowledge and those that show him to be making a claim to knowledge:

> To resolve the paradox we need only suppose that he is making a dual use of his words for knowing. When declaring that he knows absolutely nothing he is referring to that very strong sense in which philosophers had used them before and would go on using them long after – where one says one knows only when one is claiming certainty. This would leave him free to admit that that he does have moral knowledge in a radically weaker sense – the one required by his own maverick method of philosophical inquiry, the elenchus.[12]

My position is that even if Socrates is disavowing knowledge – a question that has been one of the centrepieces of epistemological enquiry in the history of philosophy – he is still countenancing knowledge to be of the constitution of the definiendum. In this sense, his understanding of knowledge remains in the mainstream of ancient Greek epistemology.

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[9] One can pursue this topic in Nehamas (1975), Vlastos (1976), Benson (1990), Rudebush (2009).
[10] Cohen (2004), http://faculty.washington.edu/smcohen/320/socdef.htm.
[11] For Socrates' disavowal of knowledge see Gulley (1968), Irwin (1974), Vlastos (1971), Vlastos (1985).
[12] Vlastos (1985), p. 12.

Plato's Epistemology

I will concentrate on the theory of knowledge and belief that Plato puts forward in *Republic* V, because I see this theory as the key to understanding the other discussions of knowledge in Plato. My thesis is that Plato develops a *constitutional* account of knowledge which he does not abandon in his later works. By a 'constitutional' account of knowledge I mean that knowing requires a full account of the constitution of the object of knowledge; hence, a successful individuation of that object, and its identification so as to enable the knower to reidentify the object in any of its occurrences. The accounts of knowledge we encounter in other Platonic dialogues are variations of the constitutional account, regarding the way we can acquire this knowledge, or the type of information needed to fulfil the requirements for the attainment of knowledge.[13]

Republic V is significant also because it provides one of the existential arguments for the Platonic Forms, through which Plato offers his reasons for claiming that there are such entities as the Forms. It is further important because it gives us an insight into what he meant by '*doxa*', and possibly more broadly at his time, too. The passage begins with a specification of the individuation criteria for a power, which is a first in the history of philosophy. This is important methodologically because it shows, at this early stage of the development of philosophical method, that introducing a new type of entity into the ontology, namely powers, requires the specification of the criteria by which such entities can be *individuated*. Plato says:

> A power has neither colour nor shape nor any feature of the sort that many other things have and that I use to distinguish those things from one another. In the case of a power, I use only what it is set over and what it does, and by reference to these I call each the power it is: What is set over the same things and does the same I call the same power; what is set over something different and does something different I call a different one. (477c6-d5)

The criterion is not complete because it does not tell us if the criteria are both necessary and sufficient for the identity of a power. Thus we do not know how one power relates to a power that does the same as the first, but to different objects. Does Plato think this is not possible – that if they have the same operation they must have the same objects? What of hearing? Dogs hear wavelengths humans do not, although they also hear sounds we do. On Plato's criterion then we do not share the power of hearing with dogs, since the objects of the powers are different. If their objects were completely different, Plato might have insisted that what our power of hearing does is different from what the power of dogs does – the operation of hearing is different *because* the objects are different. Of course the dog's hearing example is more difficult since the objects are not all different but only some. Using a classification system one could possibly distinguish between a genus of powers (of hearing) and the species (human, canine) in cases where the powers have the same operation but (partially or totally) different objects. But then different individuation criteria would be needed to individuate generic powers and species powers.

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[13] I develop the constitutional account of knowledge as we encounter in the other Platonic dialogues that discuss knowledge in my forthcoming article in *Topoi*, issue 31.1, Jan. 2012.

On the basis of this criterion for powers, Plato distinguishes between two intellectual powers: knowledge and belief – *gnosis* or *episteme*, and *doxa*. By 'doxa' Plato does not mean what we mean by 'belief'. We understand a mental state of conviction by 'belief'. This is not what Plato thought 'doxa' signified. Knowledge and belief for Plato are mental faculties or powers, which are to be distinguished by their respective objects and by what it is that they do with these objects. What knowledge does is to represent reality clearly and infallibly; what belief does is to represent reality dimly, fallibly (*Rep*. 477e). In order to avoid misunderstandings in the use of 'belief' I will use 'opinion' as a translation of '*doxa*. We will examine in more detail what opinion is for Plato in what follows.

Plato's overall argument structure in distinguishing knowledge from opinion is the following (*Rep*. 475-479). There is such a mental state a knowledge (antisceptical position), and it is about what is. Ignorance is about what is not, and opinion is about what is and what is not. Knowledge represents reality infallibly; ignorance falsely; and opinion represents reality fallibly. Plato does not examine ignorance (*agnosia*) closely and we should not assume that he does consider it a faculty of the mind. It figures briefly in this argument primarily for symmetry, to set up the context between what is and what is not, in order to place opinion's objects in between them.

About the objects of knowledge and ignorance, Plato says: 'Then we have an adequate grasp of this: No matter how many ways we examine it, what is completely is completely knowable and what is in no way is in every way unknowable' (477a). That which completely is are the Platonic Forms. Plato says in introducing them in the present passage: 'since beauty is the opposite of ugliness, they are two? ... And inasmuch as they are two, each of them is one? ... And of just and unjust, good and evil, and of every other class, the same remark holds: taken singly, each of them is one; but from the various combinations of them with actions and things and with one another, they are seen in all sorts of lights and appear many? Very true.' (476a)

The expressions Plato uses to describe the objects of knowledge are such as: '*on*' (being), or '*elikrinws on*' (what purely is), or '*pantelws on*' (what is completely). By contrast the objects of ignorance are described as '*me on*' (something that is not), or '*medame on*' (what is in no way). The objects of opinion are described as follows:

> '... of all the many beautiful things, is there one that will not also appear ugly? Or is there one of those just things that will not also appear unjust? Or one of those pious things that will not also appear impious? There isn't one, for it is necessary that they appear to be beautiful in a way and also to be ugly in a way, and the same with the other things you asked about. What about the many doubles? Do they appear any the less halves than doubles? Not one. So, with the many bigs and smalls and lights and heavies, is any one of them, any more the thing someone says it is than its opposite? No, each of them always participates in both opposites.' (479a-b)

The challenge has always been to find an interpretation of 'is' (*on*) that fits the notions of being completely and not being in any way, while at the same time fits the notion of something being *f* and being non-*f*. There have traditionally been three interpretations given to the verb 'to be' in the present passage, in order to understand the arguments Plato develops about the objects of knowledge, opinion and ignorance. The first is the *existential interpretation* which explains the objects of knowledge as objects which fully or completely exist; the objects of belief as existing somehow to a lesser degree; and the objects of

ignorance as not existing at all in any way. This interpretation has been the basis of the tradition of the attribution to Plato of degrees of reality. Of course it is problematic to understand the sense of a lesser degree of existence, which is why degrees of existence are not countenanced in contemporary philosophy. But there is further motivation to try to find alternative interpretations for Plato's argument, because the existential interpretation does not fit Plato's explanation of the objects of opinion, namely, of something being beautiful and being ugly; we would have to assume that a beautiful objects exists to a smaller degree than the purely beautiful! Plato's characterisation of the objects of opinion in terms of being *f* and not-*f* has invited a *predicative interpretation* of 'is' (*on*), so that the objects of knowledge are those that are *f* in every sense of '*f*', e.g. the Form of Beauty is beautiful in every way of 'beautiful'; while the objects of opinion are beautiful and ugly at the same time. Although this interpretation helps us distinguish sharply between the objects of knowledge and of opinion, it is more problematic for the objects of ignorance since being completely non-*f*, e.g. cold, is as knowable as being completely *f*. Finally, there has been the veridical interpretation which understands 'is' (*on*) as 'is true'. This interpretation explains the objects of knowledge as being completely true; the objects of opinion are true and not-true; while the objects of ignorance are completely false. Here, as in the predicative interpretation, the objects of these faculties are *propositions*, as opposed to the *objects*, as they are in the existential interpretation. My own understanding of Plato's argument has led me to conclude that different passages in the argument require a different one of the three interpretations of 'is' (*on*).

What I believe is even more significant about the knowledge-opinion argument of *Republic* V is that it tells us that the objects of knowledge are different from the objects of opinion. What is known cannot be opined and vice versa! I do not think it is feasible to suggest, as has been maintained,[14] that this only means that some objects of knowledge are different from some objects of opinion, and vice versa, while the majority of their objects are in common (e.g. propositions that are either known or opined on). It is clear that the picture that Plato is presenting here is that knowledge and opinion operate on non-overlapping groups of objects. The example Plato uses to explain what he means by different powers, such as the powers of knowledge and opinion, is sight and hearing (477c). Their objects are totally non-overlapping – colours and sounds – and different in kind, as is what each of these powers does from what the other one does – seeing and hearing.

A further consequence of this distinction between knowledge and opinion is that knowledge cannot be defined in terms of opinion, as a special kind of it. The significance of this is that it contravenes what philosophers have thought for millennia about knowledge and belief, namely, that knowledge is a kind of belief, specifically, justified true belief. In fact, the origin of the latter conception of knowledge is generally thought to be Plato himself, in passages in the *Meno*, the *Phaedo* and the *Theaetetus* where he seems to be defining knowledge as a kind of true belief, e.g. true belief with an account. This conception of knowledge has been challenged only in the present times, by Gettier's famous counterexample. (Gettier (1963)) In response to numerous unsuccessful attempts in the literature to fortify the 'justified true belief' analysis of knowledge with additional conditions blocking the Gettier counterexample, Timothy Williamson proposed an alternative conception of knowledge as a *primitive* mental state, not reducible to a kind of belief. A belief can transform into knowledge if it acquires the status of evidence.

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[14] Gail Fine, "Knowledge and Belief in *Republic* 5-7" in Gail Fine (2000).

> '... knowledge, and only knowledge, constitutes evidence. This paper defends that principle; it equates S's evidence with S's knowledge, for every individual or community S in any possible situation ... Call this equation E = K.'[15]

What is important for our present concerns is that knowledge, in *Republic* V is not a kind of opinion. It is not analysable into opinion plus conditions that select out those opinions which enjoy the status of knowledge. It is the *non-analysability* of knowledge into 'belief plus conditions' that I wanted to bring out as a common feature between Plato's *Republic* V account and Williamson's theory of knowledge; but I would like to also emphasise that Plato did not think that knowledge is evidence, which is the focal point in Williamson's account of knowledge.

My claim is that for Plato, in *Republic* V, knowledge is not reducible to a type of opinion (just as sight is not reducible to a type of hearing). Knowledge and opinion are two different mental powers. Yet I believe that there is a vacillation in Plato as to what the shortcomings of true opinion are in comparison to knowledge. I argue that in *Republic* V Plato thinks of true opinion as being *qualitatively* inferior to knowledge, as cognitive states, in a way that makes their difference unbridgeable and prevents knowledge from being a type of opinion. But in other works Plato seems to think of the inferiority of opinion to be more *quantitative*, in a bridgeable way, so that if the appropriate type of information is supplied then true opinion can turn into knowledge. Both conceptions of opinion allow Plato to talk of opinion as a dream state, in so far as it lacks the grounding that knowledge has in ontology. But the *Republic* V conception is that opinion delivers 'fuzzy information', containing a mixture of truth and falsehood, while in the other works opinion seems to be gappy, even if only true, missing out on information that would anchor it in ontology.

Plato distinguishes between the lovers of sights, who do not possess knowledge but only opinion, and the philosophers, who possess knowledge:

> And this is the distinction which I draw between the sight-loving, art-loving practical class, and those ... who are alone worthy of the name of philosophers. ... The lovers of sounds and sights ... are fond of fine tones and colours and forms and all the artificial products that are made out of them, but their mind is incapable of seeing or loving absolute beauty. (476a-b)

It is important to understand the exact nature of the failings of the lovers of sights which Plato identifies. On the one hand, they fail to love the beautiful itself and only love the instances of beauty in colours and sounds and items generated from these; but on the other, they fail to grasp beauty itself. Even further, they are incapable of being shown the way to conceive of it because of the state they are in:

> And he who, having a sense of beautiful things has no sense of absolute beauty, or who, if another leads him to a knowledge of that beauty is unable to follow -- of such an one I ask, is he awake or in a dream only? Reflect: is not the dreamer, sleeping or waking, one who likens dissimilar things, who puts the copy in the place of the real object? (476b)

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[15] Williamson (1997), p. 717.

The state of the person who has opinion and not knowledge is described as a state of dreaming. He sees similarity where there is difference, and confuses the original with the copy. The latter is more important than the former because it is a mistake in the *identity* of the object.

> 'They [the sight lovers] think beauty *is* the many things they 'embrace', rather than thinking they are *like* it, and don't even believe there is such a thing as beauty itself.' (476a-c)

They are unable to see or 'embrace' the *nature* of beauty itself:

> 'Their thought is unable to see and embrace the nature of the beautiful itself.' (476b)

So the lovers of sites fail in two ways. They cannot grasp the type of entity a Form is, e.g. the Form of Beauty, and further, they cannot grasp the nature of the Form itself. But these failings are not failing in the *justification* of opinion. They are failings in the *individuation* of the objects the opinion is about – the opinion state fails to be about the objects it purports to be about, e.g. by taking the beautiful things to be beauty itself, namely, what it is to be beautiful.

But the philosophers, the lovers of wisdom, do not fail in their individuation of these objects:

> 'take the case of the other, who recognises the existence of absolute beauty and is able to distinguish the idea from the objects which participate in the idea, neither putting the objects in the place of the idea nor the idea in the place of the objects -- is he a dreamer, or is he awake? He is wide awake.' (476c)

Again, the achievements of the lover of wisdom are not ones in justifying opinions, but in successfully individuating the objects of their cognitive state, and distinguishing them from other objects that are different, even if related to them.

Such, then, is the ground of the distinction between knowledge and opinion for Plato:

> 'And may we not say that the mind of the one who knows has *knowledge*, and that the mind of the other, who opines only, has *opinion*.' (476c)

It is therefore clearly stated by Plato that the difference between knowledge and opinion is a failure to properly *individuate* the objects of the cognitive state, and to *identify* them in a way that allows the knower to *distinguish* them from other objects. More specifically, those with mere opinion cannot distinguish between a Form and the instances of the Form, because they cannot properly individuate each type of entity. Their failure is a failure in understanding the ontology of the objects of their cognitive state, not a failure of justification.

This account of knowledge is further developed by Plato's initially surprising claim that one can have perceptual knowledge, and further, that one cannot have knowledge by testimony. These claims come in the *Theaetetus*, where he says the following:

> ‘Do you imagine that there are any teachers so clever that within the short time allowed by the clock they can teach adequately to people who were not eye-witnesses the truth of what happened to people who have been robbed or assaulted? No I don’t think they possibly could; but they might be able to *persuade* them. …
>
> When, therefore, judges are justly persuaded about matters which you can know only by seeing them, and not in any other way, and when thus judging of them from report they attain a true opinion about them, they judge without knowledge, but, granted they did their job well, being correctly persuaded.’ (*Theaetetus* 201a-c)

Plato is making several claims in this passage. First, he distinguishes between perceiving and reporting as grounds for knowledge. He says that one can *know* the truth about an event that took place by *seeing* the event, but one does not know about it when it is simply *reported* to them by eye-witnesses, though one does form a *true opinion* about it in this case. Second, he distinguishes between teaching and reporting. He seems to suggest that there is a continuum between *persuading* someone of the truth about an event on the grounds of a report and *teaching* that truth *adequately* to them. Since the whole passage distinguishes between grounds for knowledge and grounds for only true opinion, Plato’s emphasis on the fact that reporting the events, within a brief period of time, falls short of teaching and can only achieve persuading suggests that given enough time one would have the opportunity to teach the truths about the witnessed events adequately enough to give rise to knowledge of these truths. Thus, we have perception and teaching, on the one hand, and reporting on the other, as grounds of knowledge and true opinion. What then is it that perception and teaching share, which reporting does not share with them regarding grounding perceptual knowledge?

The perception of an event provides the only ground for knowledge about the event: ‘judges are justly persuaded about matters which you can know *only* by seeing them’. Yet, Plato also allows that clever teachers could teach the truth of an event adequately, giving rise to knowledge in those who did not perceive it, if they are given enough time to do so. Despite appearances, these claims are not inconsistent. One can know the truth about an event *only* by seeing it because it is *casual* events Plato has in mind. Of course one can know about the sun rising yesterday morning or rising tomorrow morning without perceiving it. But with casual events, perception is the only way available to us for knowing about them. Even the person who can adequately teach the truth of about such a casual event can only do so by ultimately grounding their own knowledge on the perception of that event, even if it was not themselves that saw it. The only ground for casual knowledge about events in our environment is perception. But what is distinctive about *teaching* is that it can convey this knowledge, which reporting cannot do. The reason, I conclude, must be the type of information that is conveyed in perceiving and teaching, that distinguishes them from reporting.

It is not that perception is the only way to find out that an event *occurred*; reports can do this reliably as well. But perception gives one information about the *occurrence* of an event, about *what* transpired, including auxiliary relevant information about what did *not* transpire, and about what *interrelations* bind the parts of the event together and how they do so. Perception is our guide for the ontology of a perceived event. Questions about the event’s nature, complexity, and duration will ultimately be answered only by the information derived from perceiving it. All this information can be conveyed by a clever teacher who has ample time in her hands to do so. But it is only part of this information that can be

passed on by the eye-witness within the short period of time they are allowed to speak in court – just that such and such an event occurred, but not also how it happened, in detail, and why, as well as the reasons that make it an *f*, but not a *g* event.

This fullness and ultimateness of information about the empirical realm sets perception, and seeing in particular, as a cognitive model to aspire to even in the case of the abstract, transcendent realm. Thus, we find Plato falling back on the analogy to the perceptual model when he attempts to describe innate knowledge, first in his Theory of Recollection:

> 'The soul, then, as being immortal, and having been born again many times, and having *seen* all things that exist, whether in this world or *in the world below*, has *knowledge* of them all.' (*Meno*, 81d, myu emphyasis)

and subsequently in his Theory of Dialectic:

> 'we have at last arrived at the hymn of *dialectic*. This is intelligible only, but which the faculty of sight nevertheless imitates; for sight, as you may remember, was imagined by us after a while to behold the real animals and stars, and last of all the sun himself. And so with dialectic; when a person starts on the discovery of the absolute by the light of reason only, and without any assistance of sense, and perseveres until by pure intelligence *he arrives at the perception of the absolute good*, he at last finds himself at the end of the intellectual world, as in the case of sight at the end of the visible.' *Rep*. 532a

> 'Then dialectic, and dialectic alone, goes *directly* to the first principle and is the only science which does away with hypotheses in order to make her ground secure; the *eye* of the soul, which is literally buried in an outlandish slough, is by her gentle aid lifted upward; and she uses as handmaids and helpers in the work of conversion, the sciences which we have been discussing.' *Rep*. 533d

I shall not discuss here these and other passages in Plato's corpus where he talks of knowledge, in order to show how the constitutional conception best explains Plato's understanding of knowledge.[16] This conception gives Plato's fundamental understanding of knowledge and its difference from belief. As an aside, although the formula 'knowledge is true belief with *justification'* is taken to stem from Plato's formula of 'knowledge is true belief with *an account*', the account, in Plato's formula, is an *individuation account*, not a justifying one. So the formula that best reflects the Platonic position is: 'knowledge is true belief with *individuation*'. In a fuller account I explain how teleology, in Plato, is involved in his understanding of individuation.

Aristotle's Epistemology

The constitutional conception of knowledge is the guiding principle in Aristotle's account of knowledge:

> 'We suppose ourselves to possess unqualified scientific knowledge of a thing, … when we think that we know the cause, because of which the object is, as its cause

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[16] See note 13 above.

> and of no other, and, further, that it could not be other than it is.' (*Posterior Analytics* 71b)

Aristotle explains this further in the following:

> 'We think we understand a thing *simpliciter* ... when we know the cause, and there are four causes: (1) the essence, (2) those things whose being the case necessitates this being the case, (3) the efficient cause, (4) the final cause.' (*Pos. An.* 94a)

Aristotle's four causes are the primary constitutional principles of substances: matter, form, function, and manner of generation. Knowing what these are in relation to any substance one understands the ontology of that substance. *Qua* primary, they are also explanatory, because they explain all else about the constitution and development of a substance. It is therefore entirely in the spirit of the constitutional account of knowledge that Aristotle defines the concept of knowledge within his own epistemology.

The main difference between Plato's and Aristotle's accounts of knowledge is that Aristotle's is far more empiricist than Plato's. As we saw, Plato does allow that some knowledge is derived from perception, but he places the Forms beyond the perceptual bounds. By contrast, Aristotle holds that knowledge of the forms of substances is to be derived from perception. His explanation of how this knowledge is gained is the following:

> 'So out of sense perception comes to be memory, as we say, but from frequently coming to be memories of the same thing, [arises] experience. For memories that are many in number are a single experience. And from experience, or from the entire universal that has come to rest in the soul … [arises] the principle of skill (technē) or of knowledge (*epistēmē*).' *Post. An.* II.19, 100a)

This is an inductive way of acquiring the conceptions of universals, starting from sense perception. We perceive a temple, and then more temples; from the memories of many temples we formulate the conception of a temple, which is that of the universal. This universal is then employed in the type of knowhow that is exhibited in skill, such as in architecture, or in scientific knowledge and understanding, such as in explaining what the purpose of a temple is.

How is it that the perception of a particular delivers a universal? Aristotle explains:

> "When one of the undifferentiated particular things 'stands fast,' a primitive universal is in the mind; for although what one perceives is the particular thing, the perception is *of* a universal – for example, of a *man*, not of Callias, the particular individual. Again, a stand is made in these primitive universals, and the process continues until the ultimate concepts stand (for example, such and such a species of animal is a step towards the general kind *animal*, and so on)" (*Post. An.* 100b)

That when perceiving Callias one is having a perception of a universal is not as straightforward as Aristotle takes it to be. For clearly the perception is also of Callias. Hence, what does it mean to say that it is of the universal, or of the universal, too? The question is how we can identify and isolate in the perception the conception of the universal when we do not already possess it. A process of abstraction would inevitably need to play a

role, between many perceptions of Callias and of other human beings or organisms, before the concept of 'man' or of 'animal' was formulated in the mind. But what is important for our purposes is that the epistemological derivation of the concept begins with perceptual experience.

Armed with universal concepts, we are able to formulate universal statements which will make scientific knowledge possible. Scientific knowledge (*epistēmē*) is derived from demonstration. What is known are necessary universal truths. Demonstration is the epistemic tool of science:

> 'By demonstration I mean a syllogism productive of scientific knowledge, a syllogism, that is, the grasp of which is *eo ipso* such knowledge. Assuming then that my thesis as to the nature of scientific knowing is correct, the premises of demonstrated knowledge must be true, primary, immediate, better known than and prior to the conclusion, which is further related to them as effect to cause.' (*Post. An.* 71b)

The process that emerges is that from true, primary, immediate premises, which are better known, and prior to the conclusion of a demonstration, the conclusion, which follows on syllogistic principles, constitutes scientific knowledge. The premises will be better known in the sense of being epistemically more fundamental, rather than that they happen to be better known to the scientist deriving the demonstration. Aristotle distinguishes between what is better known to us from what is better known by nature (*Post. An.* 71b). This distinction in his theory of knowledge must be based on ontological priorities, in so far as the most general principles in nature are those that come to occupy a central place in our epistemic edifice, even if these principles are the last thing we come to discover about nature. This ontological generality also makes them primary epistemologically, since they are the skeleton on which the universe is built, and therefore any part of the universe we study will embody these principles foundationally. Further, what is described by the conclusion of a demonstration will involve the states of affairs described by the premises of the demonstration, which renders these premises prior to the demonstration. The notion of priority also rests on the logical relations between the propositions, which are governed by Aristotle's syllogistic theory.

Finally, the ultimate premises of demonstrations of scientific knowledge must be *immediately known*. The reason why Aristotle introduces this requirement is to avoid the sceptical challenge of an infinite regress of the premises of scientific demonstrations.

> 'We assert that *not* all understanding is demonstrative: rather in the case of *immediate* items understanding is non-demonstrative. And it is clear that this must be so; for if you must understand the items which are prior and from which the demonstration proceeds, and if things come to a stop at some point, then these immediates must be indemonstrable.' (*Post. An.*, 72b)

If knowledge is possible, then since it is demonstrable from premises which we need to know in order for the conclusion to be known, not all premises can be demonstrated. The reason is that this would lead to an infinite regress of demonstrations. An infinite regress would render knowledge impossible since we are not capable of infinite tasks. Hence, the regress of demonstrations comes to a stop, and the premises of the initial demonstrations are immediately known.

What then is the method by which we know the immediates? Aristotle argues that the knowledge and understanding of the immediates is of the same kind of epistemic state as the knowledge and understanding of the conclusions that follow from them; furthermore, he shows that it is not the case that we already possess the knowledge of the immediates, nor that we come to possess that knowledge, nor that we possess it but are not aware of it![17]

> With regard to knowledge of the immediates, one might pose the problem whether it [sc. the knowledge] is the same or not, and whether there is understanding of each [or not], or there is understanding of the one and something of a different sort of the other, and whether the states are not in us and come to be, or are in us without our being aware of them. … It is then clear that it cannot be either that one has them [already], or that they come to be after one is ignorant and has no state at all. *Post. (Post. An.* II.19, 99b)

As is well known, this passage and the whole of the *Post. An.* II.19 is very challenging to interpret. I will here follow the exegesis of Robin Smith, who interprets the knowledge that the *nous* provides for the immediates as a power or potentiality to grasp the primary truths.[18] This power, innate in us, is not activated until we experience the world around through perception. Then, as Aristotle describes, with repeated perceptions and memories of them we formulate experiences and finally universal conceptions. It is this process that enables us to formulate in our minds the first and primary premises that serve as the foundations of syllogistically derivable scientific knowledge. This process satisfied Aristotle's requirements that the knowledge of the immediates is not innate, nor it is acquired from scratch, but we somehow have a readiness and a disposition to grasp it. And although it is not as precise as demonstrable knowledge, it does provide the ground on which demonstrable knowledge is syllogistically built.

This account of the foundations of knowledge is empiricist, but also reliabilist, in so far as it assumes that we are built in a way that is suitable for the acquisition of knowledge of how the world is. Accordingly, Aristotle thinks that most of the received wisdom in society is reliable, and that we need to be concerned about questioning its veracity only when problems arise. Such problems could arise either from conflicts between received wisdom in society – *endoxa* –and our own observations (*phainomena*); or, conflicts between received wisdom itself. In such cases, our own reasoning will help us resolve the conflicts and reach a new position.

> As in other cases, we must set out the appearances (*phainomena*) and run through all the puzzles regarding them. In this way we must prove the credible opinions (*endoxa*) about these sorts of experiences—ideally, all the credible opinions, but if not all, then most of them, those which are the most important. For if the objections are answered and the credible opinions remain, we shall have an adequate proof. (*Nicomachean Ethics*, 1145b)

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[17] I follow the interpretation of these passages by P. Adamson, "Posterior Analytics II.19: a Dialogue with Plato?" in *Aristotle and the Stoics Reading Plato*, ed. V. Harte, MM McCabe, R.W. Sharples and A. Sheppard (London: 2010), 1-19.

[18] Smith, Robin, "Aristotle's Logic", *The Stanford Encyclopedia of Philosophy (Summer 2011 Edition)*, Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/sum2011/entries/aristotle-logic/>.

In short, Aristotle is a reliabilist epistemologist that considers the human organism, including out rational capacities, well suited to the task of acquiring knowledge about the environment. In that sense, he is an epistemological realist about our knowledge of nature and the universe at large, including metaphysical realities that our reason enables us to discern. By contrast to Plato, Aristotle's ontology is accessible to experience, not secluded to a transcendent world of its own. In that sense, nature is all inclusive of reality.

Epicurean Epistemology

Epicurus established a school that was empiricist in its epistemology, and atomist materialist in its ontology. What was distinctive about the Epicurean school, which might have also made them less popular among philosophers, was the claim that sensation is *infallible*. Despite the fact that they follow Democritus' atomism, they diverge with respect to his epistemology. Democritus thought that knowledge is subjective. He said:

> "By convention hot, by convention cold, but in reality atoms and void, and also in reality we know nothing, since the truth is at bottom."[19]

By contrast, Epicurus thought that sensations deliver the truth, and that they are one of the three main criteria by which we determine what is true. These criteria of truth are:

> Sensations (*aisthēseis*)
> Preconceptions (*prolēpseis*)
> Feelings (*pathē*)

Sensations are always true at the cost of being passive in the sense in which a well constructed mirror is true and passive. The sense organs do not add or subtract anything to the content of a sensation, being free of reasoning. They only depict what results from suffering the effect of the films (*eidōla*) – these external entities emanating from the bodies. It is our capacity to reason, and more generally, to interpret what is given in sensation that is the root of *error*. *Reason* is not subject to causal efficacy, which we suffer passively, but is creative and thus liable to err.

The *preconceptions* are the mental states that are formed from the repeated memories of particular types of sensations, e.g. the image of a horse. These repeated memories give rise to a mental state that is the ground for the creation of a universal concept. Aristotle's influence here for the generation of concepts is evident. Sensation is ground for memories, that lead to the preconception and eventually to the universal conception. The preconceptions are still in the region of the passive reaction to the environment, without interpretation or manipulation of the input, and hence constitute the second criterion of truth – being free of error.

The *feelings* are the third criterion of truth and again generated as a reaction to the external stimuli of sensation. The feelings are of two kinds – pleasures and pains. What they tell us about the world is what is pleasant and what is painful, which can then provide information about the world for ethical judgements, since pleasure is what is morally valuable for Epicurus.

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[19] F3 (DK 68B9a) in Waterfield, R., *The First Philosophers*, Oxford World Classics (OUP, 2000) p. 176.

Epicurus' epistemology is therefore empiricist. It is also foundationalist in that knowledge is built on the infallible information given to one by sensation, preconceptions, and feelings about the world. Error enters at the level of opinion which rests on the fundamental criteria of truth, but which also contains interpretation that may give rise to error. In treating sensation as infallible, Epicurus was setting his theory up against the epistemologies of Socrates, Plato and Aristotle, which may also explain why Epicureanism was not very influential in the succeeding schools of thought.

Stoic Epistemology

The Stoics, too, are empiricists and foundationalists. The ground of knowledge is given to the mind by sensation. There is no *a priori* knowledge we possess. Yet, contrary to the Epicureans, the Stoics thought that the *senses* can be mistaken in what they report to the mind. It follows that the criterion of truth for the Stoics cannot be sensation since, although some sense impressions are true, not all of them are true. Hence, the criterion of truth needs to be such as to select the true sensations from the false ones.

Zeno laid the foundations of the theory of knowledge for the Stoics:

> 'He made some new claims ... about the senses themselves, which he held were joined to a sort of stimulus received from the outside world ... He said that not all presentations are reliable but only those which have a distinctive kind of clear statement to make about the objects of presentation' (Cicero, *Academica* 1.40)

Zeno thought of sense impressions as imprints of the object on the soul, like the seal imprint on wax. Since for the Stoics the soul is physical, the imagery of an imprint could be taken quite literally.

Zeno then added a condition which is at the core of the Stoic conception of the criterion of truth. He said:

> 'When this presentation is discerned all on its own, then it is "graspable" ... What had been grasped by sense-perception, he called this itself a "sense-perception" and if it was grasped in such a way that it could not be shaken by argument he called it knowledge; if not, he called it ignorance, which is also the source of opinion which is weak and a state shared with what is false and not known. But between knowledge and ignorance he placed that "grasp" ... and said that it was neither right nor wrong but that it alone deserved to be believed. Therefore, he said the senses too were reliable because ... he thought that a grasp made by the sense was true and reliable, not because it grasped everything about the object but because it left out nothing [about it] which could be grasped and because nature had provided this grasp as a standard for knowledge and a basis for understanding nature itself. From such [perceptual grasps] conceptions of things are subsequently impressed on the soul, and these provide not just the foundations but also certain broader paths leading the discovery of reason.' (Cicero, *Academica* 1.40-42)

It is very interesting that Cicero attributes to the Zeno a sort of epistemological teleology in nature. Nature made us reliable perceptual sensors so that we can know and understand nature – an epistemology Aristotelian in flavour. Reliable but not infallible. The presentations that are grasped are a type of truth-candidate. They are to be believed, and if reason cannot undermine them, they acquire the status of knowledge. What a presentation

can offer is not everything there is to know about the object that is causing it. There are non-perceptual truths about the object which can be known through reason. But what a presentation that is grasped does deliver is comprehensive perceptual information about the object. There is a correspondence between the presentation and the thing, like the correspondence between a seal and its imprint, which becomes the ground for true belief and subsequently knowledge.

The grasped presentation by the senses (*phantasia kataleptike*) may be truthful, and should be believed, but the cognitive agent still has a choice about the matter, according to Zeno: they can choose to *assent* or not to the presentation. If they assent, they believe it as true; if they do not assent, they do not commit themselves to its truth. Thus assent is a crucial element on the way between sensation and knowledge, in that assenting to a grasped presentation puts it forward for rational investigation. If it passes the test, then it becomes firm, unshakable, in the mind, and acquires knowledge status.

The Sceptics

The Stoics were the target of attack by the Sceptics, because they held that certain knowledge is possible, which was challenged by the ancient Sceptics. The ancient Sceptics divide broadly into the Pyrrhonians, and the Academics. The Pyrrhonians questioned whether we know anything, and were committed to withholding belief on any matter. The Academics were more doctrinaire, holding that knowledge or belief with certainty is impossible.

The Pyrrhonian movement started with Aenesidemus (from Knossos, Crete) in the first century BC, although it gets its name from Pyrrho of Elis (360-275 BC), who did not write any philosophical works but lived the life of a sceptic. Pyrrho went to India, following Alexander the Great, and there studied under the Gymnosophists, who influenced him into an ascetic life style. It was Aenesidemus who founded the Pyrrhonian School two centuries later, and wrote his book *Pyrrhoneia* (*Pyrrhōneioi Logoi*) in which he argued for the suspension of belief. But it was Sextus Empiricus (160–210 AD) who wrote the most sustained exposition and development of the position in his *Outlines of Pyrrhonism* in the second century AD.

The sceptical position, as it comes through from Aenesidemus' work, is an exposition of the conflict between appearances and thoughts. Their opposition leads a rational agent to suspension of judgement which brings tranquillity to their life. The opposition is the ground for refraining from affirming or denying anything. He classified his arguments through which one can show the oppositions under his famous Ten Tropes, preserved in Diogenes Laertius (9.78–88):

1) Arguments concerning oppositions based on the differences between kinds of animals.
2) Arguments based on the differences among human beings (differences in body and in soul).
3) Arguments based on the differences between the senses, and on the complexity of perceived objects.
4) Arguments based on states (dispositions and conditions of a human being, such as age, motion versus rest, emotions, etc.).
5) Arguments based on positions, distances, and places.

6) Arguments based on mixtures (objects in conjunction with external things like air and humidity; physical constituents of sense organs; physiology of thought).
7) Arguments based on the composition of the perceived object.
8) Arguments based on relativity (to the judging subject, to circumstances, etc.).
9) Arguments based on constancy or rarity of occurrence.
10) Arguments concerned with ways of life, customs, laws, mythical beliefs, and dogmatic assumptions, all of which can be put into opposition to each other.[20]

The overall effect of his critique of knowledge claims is that there are so many coefficients undermining one's reasons for any knowledge claim that commitment to the claim would be unjustified, or commitment to this claim as opposed to its negation would be unjustified. In a sense, there is equal claim to truth between mutually incompatible statements, which is a Protagorean position to be in.

The Pyrrhonian scepticism was strengthened by the arguments of Sextus Empiricus, whose works, *Outlines of Pyrrhonism* and *Against the Mathematicians* are the main source of sceptical arguments of antiquity. Sextus was critical of the dogmatic scepticism of the Academics, who denied the possibility of knowledge. He advocated withholding belief, whether it is an affirmation or a denial of knowledge.

There is a contemporary debate on the interpretation of Sextus, regarding his position on empirical beliefs. The debate is played out between Myles Burnyeat and Michael Frede in their *The Original Sceptics: A Controversy*. Burnyeat's interpretation is that Sextus allowed claims about our sensations and feelings, but denied that these showed anything about the external world. On the other hand, Frede argues that Sextus allowed beliefs, so long as one does not hold these beliefs are derived from theoretical reasoning.

Academic scepticism started with Arcesilaus of Pitane (316/5–241/0 BC, who was the 6th Head of Plato's Academy, and turned the Academy to a school of scepticism. The position was strengthened by Carneades (214–129/8 BC) who was a later Head of the Academy. The Academic tradition was theoretical and used reason rigorously to argue for and against a given statement, thereby showing that no claim can be justified. They denied that anything can be affirmed or denied. Both philosophers argued vigorously against the Stoics, and Carneades in particular argued against any criterion of truth.

[20] Tropes as rendered by Vogt, Katja, "Ancient Skepticism", *The Stanford Encyclopedia of Philosophy (Summer 2010 Edition)*, Edward N. Zalta (ed.), http://plato.stanford.edu/archives/sum2010/entries/skepticism-ancient/.

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