

Summary of some Big Questions from Plato and the Pre-Socratics

1. What is truly real?

(Everything-that-is is in a state of flux v Everything-that-is is static, changeless, perfect)

2. In what way do universals exist?

(is there a world of changeless forms? V universals only exist in individual cases)

3. Why be good?

(Goodness is what you want to make of it v Goodness is transcendent and is good for your soul)

4. What is a soul?

(Is it made of matter? Is non-material? Is it both material and non-material?)

5. Can a soul be separated from a body?

6. Does the soul have parts? What are they?

7. Are some of the parts tied to a particular body?

8. Can any soul go into any body?

9. Is the soul immortal?

10. What happens to us when we die?

11. How do we explain why things happen in the world?

(Are there certain basic properties of matter, which explain everything else that happens or do we need to suppose that there is a mind or purpose behind events in the world?)

12. What are the basic material elements of the world?

(earth, air, fire, water? v little bits of everything in everything v atoms in the void?)

13. How do we explain where motion and change come from?

(is it just the way the world is, or is it transmitted from a source?)

14. How is the cosmos structured? Time, space, matter, earth, planets stars.

(finite spheres with no space beyond v a system of spheres drifting in infinite void)

15. Do the stars affect the world below?

16. How do we explain birth, maturity and death of animals and plants in biological nature?

17. What is knowledge and how can we know things about the world?

18. How can we live well, together in cities?

19. Is there a science of philosophical argument?

Aristotle I

Aristotle (b 384 BCE) came from the town of Stagira in Macedonia, Northern Greece. He came to Athens and studied at Plato's academy. Apparently Plato, impressed by his brilliance, called him 'the mind'. He eventually left the Academy on Plato's death in 347 and after returning north and pursuing his own research, he became a tutor to the young Alexander, son of the King of Macedon. He went on to found his own rival school of philosophy at the Lyceum. They were known as the Peripatetics (literally those who walk around), perhaps after the exercise area near the site. While the Platonists focused on maths, ethics, argument and scepticism, Aristotle's followers focused on working on a universal scientific approach to everything in the world, from anthropology, via cosmology, economics, ethics, literary criticism, logic, meteorology, metaphysics, physics, politics, psychology and rhetoric through to theology and zoology. His writing is very dense and his works are preserved sometimes in note form, taken from his lectures.

Though our science is very different from his, much of our everyday scientific language derives from the formal language in his writings. His work has had a major influence on medieval and enlightenment philosophy and theology in the Islamic, Jewish and Christian worlds. Like Plato, he has been a constant reference point and stimulus for ideas and reflection to the present day.

See if you can read and give your own account, based on the text below of these key Aristotelian ideas:

- When do we have knowledge?
- How many elements are there?
- Why does he call 'form and matter' principles?
- How does he explain change and stability in the world, using the idea of form and matter?
- What distinguishes things of nature from human artefacts?
- What three different sorts of change does Aristotle identify?
- What is the difference between an 'essential property' and an 'accidental property'?
- What is the point of making a distinction between 'potential' and 'actualisation' – how does that fit in with the idea of matter and form?
- Why does Aristotle think that natural scientists have to consider purposiveness?
- What four things do we need to consider if we are to answer the question 'why?' satisfactorily?
- Why do you think Aristotle believes the first source of change has to be changeless?
- Why does Aristotle envisage God as mind thinking itself?

Some Key Aristotle Vocabulary

Form/Matter; essence/accident; potential/actualisation; formal, material, agent and final causes. Being (ousia): 1. An existent thing, like a star, or a person, or a sound; 2. The essence or nature (defining qualities) of any kind of existent thing 3. The material of which a thing is made; unmoved mover.

Physics A

184a1

Since knowing and understanding are achieved in all fields which have principles or causes or elements from our getting to know just these things (for we believe that we know something when we find out its first causes and its first principles and down to its elements), clearly we should first try to define what concerns the principles of the knowledge of nature as well.

It is a fact of life that our pathway is from the things which are better known and clearer to us, to those things that are clearer and better known by their nature. Because 'knowable to us' is not the same thing as 'knowable' absolutely. This is why this method has to lead us forward from those things which by nature are less obvious, but seem clearer to us, to those things which by nature are clearer and more suitable objects of knowledge.

For us initially, the clearest and plainest things are compounded. But at a later stage out of these, the elements and the principles become objects of knowledge for those who analyse these things. Which is why we should proceed from universals to particular things. For in our perceptions wholes are more easily knowable, and the universal is a sort of whole. Because a universal encompasses many things as its parts. Something a bit like this happens with names with respect to an explanation. [A name] signifies a whole without any definition, like 'a circle' but its definition divides it up into its individual parts...

184b15

Now the origin must either be one or many, and if it is one, either changeless, which is what Parmenides and Melissos say, or subject to change, as the Physical philosophers claim, some of them saying that air is the first origin, some that it is water. And if there are many origins or principles, they are either finite or infinite, and if they are finite, and greater than one, they are either two, or three, or four, or some other number. If they are infinite, then they are either all of the same kind, though differing in shape, as Democritus teaches, or differing and contrary in form. The questions are similar for those trying to work out how many existent things there are; for they try and find out whether the original things out of which existent realities consist are one or many, and if many, whether they are finite or infinite, so that they are trying to find out whether the origin and the elements are one or many.

To examine whether that-which-is is one and changeless is not an investigation of nature; just as in geometry you can no longer provide an explanation for someone who rejects your axioms – but we either need another science or one which is common to all things – similarly here [we are deprived of an explanation] in the discussion about principles. For there is no longer an origin if everything is one, and one in just this way. An origin is the origin of something else, or some-things else)...

Solving the Parmenides puzzle:

187a3

And this is clearly not true:

“that if ‘that-which-is’ means one thing, and it is impossible to allow a contradiction, nothing will be that “is-not””

For there is nothing to prevent ‘that-which-is-not from being: [not ‘that-which-is-not absolutely] but ‘that-which-is-not-x’.

And it is weird to say that ‘if there is nothing apart from that-which-is-itself, all things will be one’. How do we know that ‘that-which-is-itself’ is not just [a regular universal]? And if that is the case, there is nothing to stop there being lots of ‘things-that-are’, as we have said. So it is clear in this way that it is impossible for ‘that-which-is to be one’.

The four elements

After considering theories that the explanatory principles of the world are infinite (the theory of Anaxagoras) or dual (with two primal forces ‘like densification and rarefaction’, ‘love and strife’ tugging in different directions) or four (as in the four-element theory of Empedocles. He says this:

189a20

It is clear from this that [the explanatory principles] are neither one nor infinite. But since they are finite, it stands to reason not to take them to be just two. It would be difficult to see how densification could bring about rarefaction or the latter densification. Similarly with any other opposition. For love does not gather in strife and make something out of it, nor does strife do the same for love, but both act on some third thing. And there are some who suppose more than this out of which they reconstruct the nature of the things that are.

In addition to this, there is a further difficulty if you do not suppose that there is another nature additional to the opposites: We do not see the opposites constituting the reality of any of the things that are. But if something is an explanatory principle, it cannot be something that is just [predicated on something that is already there]. In that case there would be an explanatory principle of an explanatory principle. For something which is already there as a bearer of a property is itself an explanatory principle, and seems to be logically prior to what is predicated of it. And again, we do not say any real thing (ousia) is the opposite of another real thing. For how could there be any real things [arising] out of non-real things? Or how could the non-real be more fundamental than the real?

That is why, if you think our earlier argument is true, along with this one, necessarily, if you want to hold on to both arguments, you must suppose some third thing, as with those who say that the universe is one nature like water or fire or something intermediate. Better however to say ‘intermediate’, for fire and earth and air and water are bound together by oppositions. For that reason it is not unreasonable do what those do, who presume some underlying substance different from these...

Form and Matter

190b17

So it is clear that if indeed there are causes and principles of the things that exist in nature, fundamental things out of which they exist and have come into being, not in terms of some supervening property, but in terms of what an existent thing really is, **everything comes into being out of form and underlying substance...** For it is clear that the things that come to be would do so out of these two. The underlying substance is numerically one (the human [who becomes musical] and the gold [that becomes a statue] and underlying substance generally can be counted)) but has two aspects. For it is a particular thing, and what comes into being out of it does not do so as a supervening property of it. But privation [not-being-red] or opposition [being not-red], are supervening properties...

We have now stated how many fundamental principles there are with regard to the generation of natural entities, and how it is that they are that number. And it is clear that for any pair of opposites there must be some underlying substance and that there are two basic opposites. But in another sense it is not necessarily so. For in order to bring about a transformation, you just need one of the opposites to act by its presence or absence.

We can grasp the nature of the underlying substance by an analogy. As bronze is to the statue, or wood to the bed or as any unshaped material is to any artefact that has a shape before it acquires that shape, so this underlying substance is to a real thing, a particular thing, anything that is.

191b13

We say that nothing *simply* comes to be out of 'that which is not' – but there is *some* sense in which it comes out of 'that which is not', as in when something supervenes on it [the human becomes a musician]. For there was an absence of a property [being a musician] which of itself is 'something which is not', and out of this property that was not originally there, the property comes into being [the person becomes musical]... But it is just as much the case that that-which-is does *not* come into being out of that-which-is, other than when something supervenes.

Physics B

192b8

Natural kinds and change

Of the things that are, some exist by nature and some because of other causes. Animals and their organs and plants exist by nature, as well as the simple bodies, like earth and fire and air and water, for we say they *exist* by nature, and they *are as they are* by nature. And all these seem to be very different from things that are not constructed naturally. For each of them has within them a principle of change and rest, in some cases locomotion, in others growth, in others, alteration of appearance. But in the case of a bed or a shirt or any other such kind of thing, insofar as it falls within the categories and is the product of technology, it

has no natural source of transformation within it, but insofar as it happens to be made of stone or earth or a mixture of these, it does have a source of change by nature...

[the case of human artefacts] none of them has the principle of action within them, but in some cases the principle of action is in other entities and external, as in the case of a house and other such things produced by handcraft. Others have the source of action within them, but not in virtue of being this particular sort of thing, whereby the causes are in them incidentally. Nature, is what we have described. Anything that has such a principle within it has a nature. All these things are a real thing. A real thing is something that underlies, and it is in the underlying reality that the nature is always present. All of these things are 'natural' and all their essential properties are 'natural' like fire moving upward.

The difference between essential properties and accidental properties

193a9

Some hold that 'nature' and 'the reality' of things that exist by nature is the primary form embedded in each thing, which of itself is formless. Thus 'the nature of the bed' is the wood. Or the 'nature of the statue' is the bronze. Antiphon suggests this is indicated by the fact that if you were to plant a bed in the earth, so that it began to decay and sent up a shoot, it would not become a bed, but it would become wood. Thus its being a bed only subsisted **incidentally**, as an arrangement by human custom and technology, but its true reality (essence – ousia), was that which remained continually as it underwent these changes.

Potential to actualisation

193a 28

We talk about 'nature' in this one sense, meaning the primary matter underlying each thing that has in it a principle of change and transformation. But in another sense we mean the outward shape and the form that we can give an account of. There is an analogy between craftsmanship and nature... If a [set of planks] is only a bed **in potential** and does not yet have the form of the bed we would not say that there is any craftsmanship present, or that this is a craftwork. Nor would we do so in the case of things that are fashioned by nature. Material which is **in potential** flesh or bone does not yet have its **nature** until it takes on the **form** according to the **account** by which we define what it means to be flesh or bone...

So in another sense 'the nature' of something would be the outward form and the essential form of those things that have a principle of change within them, not as something separable from it, but according to the scientific account... And it is more appropriate to call this the nature than the matter. For we talk about something more in terms of what it **actually is** than in terms of what it **potentially** is. A human comes into being from another human, but a bed does not come from a bed; and that is why they say it is not the artificial organisation that is the nature, but the wood, because if it did produce a shoot, the shoot would not be a bed, but wood.

Nature as purpose

194a 21

If art imitates nature, and it belongs to the same class of skilled knowledge to know the form and the material for some purpose (the doctor understands health, but also bile and phlegm, in which health consists; similarly the builder understands the form of the house and the material, the bricks and the wood) then the scientific knowledge of nature would involve understanding both these two natures. In addition the purpose and end of nature and all that is necessary for these. The nature of something is an end point and a purposive goal (wherever we have a continuous change that has an end point, this is the limit and the purposive goal... though not every end point is a goal, only what is best).

The Four Causes or Explanations.

194b16

Now that we have defined all these things, we should examine the causes, what they are like and how many there are. All our efforts are for the sake of knowledge, but we do not consider that we know anything until we have grasped the 'why?' in each case (and that means grasping the first cause). So clearly we too have to do this, with respect to generation and corruption and all physical transformation, so that once we know their principles we can refer to them in the case of each individual thing we investigate.

So in one sense we mean by 'cause' that out of which a thing comes into being, while still remaining in it, like the bronze of the statue or the silver of the jar and things of that kind.

Another sense is the 'form' and 'model', this is the essential account of what it is to be, the general features of this (as in 'the octave is the ratio of 2:1', and arithmetic in general) and the parts that belong in the account.

Then there is the first principle of transformation or the first principle of coming to rest, as in the intentional agent, or the father of the child, and generally the one who makes what is made or transforms what is transformed.

Again there is the end; this is the purposive goal, as health is the goal of taking a walk. 'Why is she walking?' we answer 'to be healthy', and when we say this we believe we have explained the cause. And anything that someone else moves and becomes a means to an end (like... or purgation or medicines or instruments in the case of health); all of these things are for the sake of the goal, but they differ in that some are actions and some are instruments.

The unmoved mover, source of movement in the universe

Physics Θ

258b10

Since there has to be a continuous change that never ceases, there must be something eternal which is the first source of change, whether this is one or many. And the first changer, cannot be subject to change. Whether all the things that are changeless changers need to be eternal is irrelevant to this argument. But it is clear to anyone who examines the case that there must be something that is itself changeless, beyond any form of transformation, whether simply or incidentally, but which is the source of change in something else...

[even if there are other changeless changers that come into being and pass away]

There is something that encompasses all of these, and is beyond each individual, and is the cause of the existence of some and the non-existence of others and of the continuous transformation. This individual is then the cause of the change in those others, and they in turn are the causes of change in the rest.

Then if in fact change is eternal, the first changer will be eternal, if it is one. If it is more than one, then there will be several eternal things. But we should consider that one is better than many, and finite rather than infinite. Provided we get the same outcomes, finite is always to be preferred. For in the things of nature, as far as possible, we should find what is determinate and better. And one changer is sufficient, which as the first of the changeless things and as eternal, will be the principle of change in everything else.

So it is clear from that that there must be something which is one and eternal, and is the first source of change. For we have shown that there must always be change, and if there is always change, that it must be continuous.

Metaphysics Λ

1072a 19 *God as mind thinking itself*

...there is something which is ever changing with a ceaseless motion, and this motion is in a circle (and that is clear not only from the argument but from plain fact), so that the first heaven would be eternal. And there must be something that moves it. Since we have that which is purely changed, and that which causes change and what lies between... so there is something which causes change without being changed, it is eternal and it is a real existent and an actualisation. Now something that causes this sort of change is the object of yearning and the object of thought. This causes change without itself being changed. That which appears lovely is desirable, and the first thing we choose is that which is lovely. We reach for it because it seems so, rather than its seeming so because we reach for it. For thought is a principle. And mind is moved by the object of thought...

If something undergoes change, it can be otherwise. Thus the first motion [of the outer heavens] even if it is in actualisation insofar as it is undergoing change, it is able to be

otherwise, at least in its position, if not in its essence. But since there is something that causes change while itself remaining unchanged, but being in actualisation, this cannot be otherwise in any respect. Motion is the first of the transformations, and of all the motions, the first is motion in a circle. It is this motion that [the first changer] brings about. Therefore it is what it is by necessity. Insofar as it is necessary, it is lovely, and thus it is a principle. For what is necessary can mean all of these: that which forces something else against its inclination; that which is necessary for some good end; that which cannot be otherwise than just so. It is on just such a principle that the heavens and the natural world depend.

Its quality of life is that of the best of our life, that we only experience in brief moments. For this being it is always so (impossible for us) since the actualisation of this being is a pleasure (and that's why for us the most enjoyable things are being conscious, perception and thought, because hopes and memories come with these). Contemplation of itself is of what is of itself is the best, and here, contemplation par excellence is of the best par excellence. Mind thinks itself as it in an apprehension of the object of thought. For it becomes the object of thought as it senses and thinks, so that mind and the object of thought are the same. For what is receptive of the object of thought and of existence is mind, and it is in actualisation when it has both, so that it is this grasp of [its own] existence that seems to lend our own minds something divine, and it is contemplation that is most pleasurable and most noble.

If all that is correct, as is the case for us occasionally, in the case of God this is a perpetual wonder. If it goes beyond that, then it is still more marvellous. But it is so. And this being exists as a life. For the actualisation of mind is life, and that being is actualisation; and the essential actualisation of that being is the most noble, eternal life.