

Ancient Pluralists: Anaxagoras and Empedocles

One text correctly identifies the problem facing post-Parmenidean philosophy in the fifth century BCE, to find a way to reconcile Parmenides rejection of change with the possibility of giving a rational account of the changing world of sense experience.

A word of caution needs be made in this connection. The Parmenidean “School” responded to these attempts to find a rational account to explain the changing world of sense perception. Zeno of Elea and Melissus of Samos should be read in this connection. Also, Heraclidean and Pythagorean “Schools” persisted and also responded to Parmenides’ challenge. We, also, need to keep in mind that the Ancient Pluralists were one of two main responses to Parmenides. The other response was the Ancient Atomists.

Turning now to these Ancient Pluralists, the first thinker we shall consider is Anaxagoras of Clazomenae. Anaxagoras was from Clazomenae in Ionia. He was born around 500 BCE. He lived for about thirty years in Athens, where he was an associate of Pericles, the famous Athenian politician and general. He is said to have predicted the fall of a meteorite at Aegospotami in 467, and he said that the sun was a fiery stone rather than a god. His political association with Pericles combined with his nonconformist scientific views resulted in his being prosecuted for impiety (a charge that the Athenians would later make against Socrates and Aristotle). The prosecution took place around 450 (although some reports place the date closer to 430); Anaxagoras was convicted and exiled from Athens to the northern Ionian city of Lampascus near Troy, where he dies in 428. Anaxagoras envisioned an original state for the cosmos in which, he says, “All things were together.” All things, except that is, Mind (*nous*). Mind is said to know and to control all things. At some time, which Mind chooses, it sets the original mixture into rotation, as a result of which things are separated out and recombine with one another to produce the world we perceive through our senses. The exact details of Anaxagoras’ theory are uncertain, and there is much debate among scholars as to the correct interpretation of the fragments we have left. By “all things” does he mean that everything in the natural world is already a mixture? Or is “things” a technical term for Anaxagoras that includes only the opposites which separate and combine to produce everything else?

What we do know is that Anaxagoras was interested in cosmology. Of the surviving fragments, and from the testimony of Plato (in *Phaedo*), his main interest was in physical explanations. Anaxagoras accepted Parmenides’ view concerning Being, posits that all things originally were together, unlimited in both amount and smallness, being mixed together. We can see this notion in Fragment 59B1.

All things were together, unlimited in both amount and smallness. For the small too was unlimited. And when all things were together, nothing was manifest on account of smallness. For air and aither dominated all things, both being unlimited. For these are then largest ingredients in the totality, both in amount and in size.

Anaxagoras’ famous “seeds” notion is found in fragment 59B4a.

These things being so, it is necessary to suppose that in all things that are being mixed together there are many things of all kinds, and seeds of all things, having all kinds of shapes and colors and flavors; and that humans too were compounded and all the other animals that possess life; and that there are inhabited cities and cultivated fields for the humans just as with us, and that there are for them a sun and a moon and the rest just as with us, and that the earth grows many things of all kinds for them, of which they gather the most useful into their dwelling and use it. I have said these things about the separating off, because it would have occurred not only with us, but elsewhere too.

The principle that separated this primordial unity is Mind (nouj). Mind is the second principle in Anaxagorean physics. Mind accounts for motion of an object, and is the principle of individualization. (See fragments 12 - 15).

Fragment 59B12.

The rest have a portion of everything, but Mind is unlimited and self-ruled and is mixed with no thing, but is alone and by itself. For if it were not by itself but were mixed with something else, it would have a share of all things, if it were mixed with anything. For in everything there is a portion of everything, as I have said before. And the things mixed together with it would hinder it so that it would rule no thing in the same way as it does being alone and by itself. For it is the finest of all things and the purest, and it has all judgment about everything and the greatest power. And Mind rules all things that possess life - both the larger and the smaller. And Mind ruled the entire rotation, so that it rotated in the beginning. And at first it began to rotate from a small area, but it <now> rotates over a greater range and it will rotate over a <still> greater one. And Mind knew all things that are being mixed together and separated off and separated apart. And Mind set in order all things, whatever kinds of things were to be - and also this rotation in which are now rotating the stars and the sun and the moon, and the air and aether that are being separated off. This rotation caused the separating off. And the dense is being separated off from the rare and the hot from the cold and the bright from the dark and the dry from the wet. But there are many portions of many things. And nothing is being completely separated off or separated apart from another except Mind. All Mind is alike, both the larger and the smaller. But nothing else is like anything else, but each single thing is and was most plainly those things of which it contains most.

Fragment 17 clearly shows the acceptance of Parmenides' view concerning generation and corruption, as well as it demonstrates Anaxagoras' solution.

Fragment 59B17

The Greeks are wrong to accept coming to be and perishing, for nothing comes to be, nor does it perish, but they are mixed together from things that are and they are separated apart. And so they would be correct to call coming to be being mixed together, and perishing being separated apart.

Clearly, the “existing things” referred to in the fragment are the “seeds” *spermata* or original qualities of every kind. Anaxagoras’ solution to Parmenidean Monism was to posit in the primordial chaos a mixture of qualitative originitive substances (a many) which were separated out of this mixture by the ordering power of Mind. The seeds have no limits in their magnitude, in the sense that each and every one is qualitatively unlimited and inexhaustible. They are not limited in their smallness, in the sense that each and every one of them is infinitely divisible. We can divide any seed whatever into continually smaller parts because we can never arrive at nothing, which is *not* (what *is* can never *not be* says Anaxagoras using strongly Parmenidean vocabulary.)

These seeds are commonly called *homoiomeries*, which means that when they are subdivided they always yield parts of things which are qualitatively identical. Ex: if hair is divided, the parts of hair that result are still hair, etc. The upshot is that in order to identify any quality presented to sense-perception, Anaxagoras would appeal to a particular *homoiomery* which accounted for the presence of that quality in the perceptible compound.

We can see this from a doxographical report from Aristotle.

Anaxagoras ... says that the elements are unlimited in number. For he makes the elements homoiomorous things, such as bone, and flesh, and marrow, and each of the others whose parts have the same name [as the whole]. Aristotle. *On Generation and Corruption* 314a18 - 20 trans. Curd.

Each quality was accounted for by a *homoiomery*, and hence, “everything is in everything”. Upshot: The Parmenidean restriction imposed upon knowledge of the world of change can be side stepped because the totality of things is always equal, it neither grows nor diminishes; and since all is in all generations and corruption can be accounted for by the motion of *homoiomeries* that constitute the compound.

What accounts for these transformations? The movement impressed upon the primordial chaos by mind (frag. 13). What exactly was this second principle? We need to be cautious here in attributing to Anaxagoras a notion of an immaterial mind, akin to modern notions of the mind/body duality. *Precisely* what role mind played in Anaxagoras’ system was unclear even among the ancients. Plato (*Phaedo* 97b - 98d) mentions that Anaxagoras uses Mind as the cause of motion, but in the specifics of the account, Mind plays no role in the explanation of motion.

One day I heard someone reading, as he said, from a book of Anaxagoras, and saying that it is Mind that directs and is the cause of everything. I was delighted with this cause and it seemed to me good, in a way, that Mind should be the cause of all. I thought that if this were so, the directing Mind would direct everything and arrange each thing in the way that was best. If then one wished to know the cause of each thing, why it comes to be or perishes or exists, one had to find what was the best way for it to be, or to be acted upon, or to act. On these premises then it befitted a man to investigate only, about this, and other things, what is best. The same man must inevitably also know what is worse, for that is part of the same knowledge. As I reflected on this subject I was glad to think that I had found in Anaxagoras a teacher about the cause of things after my own heart, and that he would tell me, first, whether the earth is flat or round, and then would explain why it is

so of necessity, saying which is better, and that it was better to be so... This wonderful hope was dashed as I went on reading (the book of Anaxagoras) and saw that the man made no use of Mind, nor gave it any responsibility for the management of things, but mentioned as causes air and aether and water and many other strange things. That seemed to me much like saying that Socrates' actions are all due to his mind, and then in trying to tell the causes of everything I do, to say that the reason that I am sitting here is because my body consists of bones and sinews, because bones are hard and are separated by joints, that the sinews are such as to contract and relax, that they surround the bones along with flesh and skin which hold them together, then as the bones are hanging in their sockets, the relaxation and contraction of the sinews enable me to bend my limbs, and that is the cause of my sitting here with my limbs bent. (Plato. *Phaedo*. 97b - e and 98 b - d trans Grube)

Frag 13 tells us that Mind rules all things that possess life, and that Mind rules all rotation, and accounts for all order of things: supposedly through the mixing together and separating off and apart of *qualia*. This mixing and separative is referred to by the motion of rotation (dense from rare, hot from cold, bright from dark), but the exact mechanics of this mixing and separating are left unclear. We have the testimony from Plato and Aristotle that show and corroborate the vagueness of this account. One thing is clear, Mind seems to play an analogous role that *logoj* played in the Heraclidean system.

Empedocles of Acragas also addressed the Parmenidean challenges to explanations of or knowledge about the world of change (i.e., the world of sense-perception). He was born in Sicily about 492. He is known to have visited the Southern Italian mainland, and, while he was heavily influenced by Parmenides, there are also traces of Pythagoreanism, the other great philosophical movement of Southern Italy, in his work. At home in Acragas, he was an active politician, supporting democracy against oligarchy, even though his aristocratic family connections might have made that support surprising. Empedocles was both a philosopher and a medical man, and he was a truly flamboyant figure. He dressed ostentatiously (ancient reports tell of rich purple robes, a golden diadem, and bronze shoes) claimed magical powers for himself, and in fragment B112 says of himself "I go about among you, an immortal god, no longer mortal, honored among all as it seems, wreathed with headbands and blooming garlands". There are many stories of his fantastic activities: Reportedly he kept alive for a month a woman who had no pulse and was not breathing. He diverted two streams to rid the city of Selinus of a plague (and was said to have been acknowledged as a god as a result). Empedocles was exiled from his home and probably died in the Peloponnese, although given his character, it is not surprising that more exciting tales of his death were told. One appears in Diogenes Laertius: Desiring to show that he was indeed a god, he leapt into the crater of Mt. Etna. Although the details of his life present the picture of a flashy and eccentric figure, we should not lose sight of the fact that he constructed a serious and complicated theory of the cosmos and our knowledge of it; and that he was profoundly interested in the question of the proper place of human beings in the universe.

Even though he was a rather flamboyant figure, Empedocles, arguably, takes us a step further than Anaxagoras in trying to explain the dynamics of change. Empedocles accepts the

four elements explanation of the constitution of compounds. Generation and corruption are accounted for in terms of mixture and dissolution of determinate substances. These constitutive substances are not born and are indestructible. What accounts for these mixtures and separations are the principles of Love and Hate (attraction and repulsion) to account for movement. These cosmic forces explain the process of generation and corruption, and account for the perceived cyclical nature of things. This line of thought is reminiscent of Heraclidean cyclical account of the universe. When Love predominates over Hate, the universe resolves itself into a primordial unity only to be separated into the many by Hate. Hate, when it predominates, separates the elements into their specific spheres and no object of perception is possible. It would appear that Empedocles posits two forms of chaos: One of absolute unity and one of absolute diversity. Only in the times of mixture can the world exist as we know it.

As to Empedocles' theory of knowledge, it would appear that he thought there were *effluvia* streaming forth from objects which could fit different sense organs and be perceived. Plato also refers to this in the *Meno* (76c - d). Fragment 31B104 says:
For by earth we see earth, by water, water, by aether, divine aether, and by fire, destructive fire, yearning by yearning [Love] and strife by mournful Strife.

He apparently also conceived of human thought in the same manner. Fragment 31b105 says: <the Heart>, nurtured in the seas of rebounding blood, where most especially is what is called thought by humans, for the blood round the heart in humans is thought.

With regards to his ethical conception, Empedocles fundamentally agreed with the Pythagoreans. Hence, we get a *religious* notion of ethics. That is, the *religious* principles are not separated from and made clear of their *ethical* import.

Upshot: Although we are fleshing out a richer account of the dynamics of change in sense-perception from Anaximander to Empedocles, we haven't taken too many steps in providing a *physical* account of it. For that, we need to turn to the ancient atomists.