Pre-Socratic Philosophy: Beginning Phase

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From their precursors

- As we have seen, the Pre-Socratics appeared against a backdrop of anthropomorphic supernaturalism.
 - Hesiod's *Theogony* provides an expression of this kind of view.
- This is not to say that such a worldview is either nonsensical or useless; nor is it without similarity in its general form to the thought of the Pre-Socratics.
 - o There are conceptual affinities giving Hesiod's account some logical sense.
 - Even if technically ineffectual, a pervasive anthropomorphism results in a familiarized and therefore less frightening world experience.
 - And although anthropomorphic and therefore almost certainly false, some explanation is offered for the origin, nature, and behavior of the world.
 - Recall, for example, the early appearance of *Eros* as a protophilosophical principle of change.

A new genius

- It is striking that little precedes the Pre-Socratics that anticipates their revolution.
 - Although the early Greek world was far from isolated geographically, there is little evidence to suggest that nearby cultures could have provided the primary impetus away from Hesiod's worldview.
 - o The Babylonians brought astronomy to the Greeks.
 - The Egyptians had developed mathematics and commerce.
 - o But nowhere else do we see the thorough-going naturalism and rationalism that evolves in Greece.
- Several sources of the development of philosophy may be identified.
 - First, there is the competitive nature of the Greeks, evident in their many agonies, competitions in art, song, dance, theater, and physical prowess. The dialectical method may be construed as a competition in which truth is the prize. This method is further developed by the Sophists and is evident in the emerging Greek democracy, wherein competition for the ear of the public as for the name of truth, if not the fact, become preeminent.
 - Second, the development of phonetic language, its increasing use and significance in Greek society, makes possible an increasingly sophisticated and truth-oriented written tradition. Where the oral tradition has its focus on an immediate interaction with its audience, the written word makes possible exchange with persons geographically and temporally distant. The written word makes possible comparison of *logoi* across times and communities. It enables the greater exertion of an ideological influence as authors, like poets, vie for attention. Perhaps it is in this environment that the speculation on truth turned increasingly naturalistic and rationalistic as thinkers ever sought ascendancy. Note in particular the potential role of logic and empirical evidence in such a transition: contradiction and arbitrariness provide continual checks on theories (from *theoria*, presented before an audience) and the empirical likeness of oil to

water, for instance, may provide ground for their claimed *logical* unity. That is, philosophy results from a linguistic tradition shaped by the increasingly acute appeal to sense and reason, which increase is facilitated by the written word.

Elements of First Philosophy

- As we have seen, all creatures bring some form of order to the universe. Humans bring rational order, order provided by rational *logoi*. The Pre-Socratics represent a major advance in the rationality of the cosmology. Key concepts in their cosmology are as follow:
 - O Phusis: The term 'phusis' gives us "physics" and related terms. It derives from a word meaning "to grow" and typifies the natural as opposed to the artificial. The distinction between natural and artificial is as follows: the nature of the natural is internal to it; the nature of an artificial object is imposed from without. That is, ta phusika (things physical/natural) have an internal principle defining their essence and behavior. This principle or arche is a logos capable of knowledge by humans. Note that with the designation of the "physical" as self-contained and self-driven, we see the origin of the concept of nature that we employ today.
 - O Arche: principle. As above, the Pre-Socratics were convinced that the natural world was governed by a set of principles whose knowledge gave humans insight into the essential nature and workings of the universe. To conceive of the world as "principled" or "principle-driven" is to conceive it as highly systematic, orderly, and (in principle) knowable.
 - Logos: "word", account, concept. As we have seen, this is a term fundamental to human knowledge. For the Pre-Socratics, it emphasizes their conviction that all reality is characterizable in terms of words or concepts that humans can understand. That is, if logoi, in the form of natural principles, are intrinsic to the natural order; and if logoi are concepts and thus in principle intelligible to humans; then the whole of reality is in principle intelligible to humans. It remains only for us to discover the logoi in which the universe is written.
 - Thus, integrating and expanding on the above, we see emerging this notion of cosmos:
 - The universe is wholly ordered.
 - The universe is completely intelligible to humans, at least in principle.
 - The origin and development of the universe was an ordered process, not an arbitrary series of events.
 - The origin, development, and behavior of the universe proceeds according to naturalistic principles, not supernatural, anthropomorphic ones
 - The principles ordering the universe are *internal* to it, rather than imposed from without.
 - The principles of universal order are *systematic*: a single system of principles governs all phenomena.
 - The principles of universal order are *simple*: a small set of principles governs all phenomena.
 - The universe for the Pre-Socratics was a quintessential *cosmos*: beautiful, elegant, harmonious, wholly ordered and rational being.
- Logical method:

¹ The term 'harmony' derives from *harmos*, the Greek term for a builder's joint akin to the modern builder's triangle.

- Since the Pre-Socratics were convinced that the universe was governed by rational logoi, their method of discovery and advancement was "logical" i.e., their method reflected their medium.
- Thus, *argumentation* and *logic* were of primary value in discovering the *archia* of the universe.
- More generally, because the nature of the universe was in principle knowable by humans, the Pre-Socratics should in general expect or anticipate *evidence* for the truth of their views. Evidence is possible, for humans, where information derived via sense or reason is to be had. This means that either some form of "scientific" observation should, in principle, possibly verify an account, or some rational argument.
- o In other words, the Pre-Socratic method was *non-dogmatic*, and rational.

Rationalism:

- We can, then, characterize the original development of philosophy as an expression of an emerging *rationalism* in human culture. This is a broad and important principle of human thought, which we may define as follows:
- Rationalism is the view according to which the world around us is understandable in human terms (*logoi* words, concepts, ideas), where
 - o (a) the extent to which the world is *logical*, i.e., to which our words or ideas express the nature of all things tends to the *maximal* (as opposed to the *arbitrary* or *illogical*, where no *logos* can be put to a given state or event);
 - (b) a complete, logical account of all things tends to be *systematic*, meaning that the more general principles governing the world are relatively few in number (i.e., an *economical* or relatively *simple* set of basic principles) and that the relationships among the basic principles are themselves relatively clear or definable;
 - o (c) these "words" or principles the truths of the universe generally are at least in principle *knowable* by application of the natural human means of acquiring knowledge, sense and/or reason; in other words, the world is open to investigation by a *critical* method, wherein assumptions are challenged and should be otherwise justified by reference to sense information or rational thought. Note that the supposition of logic and systematicity encourages the pursuit of truth by the critical examination of prior truths.

- Naturalism:

- o In addition, we can characterize an important trend in early philosophical thought as *naturalistic*.
- o Naturalism is the view that the principles (*archia*) defining the material world around us and governing its behavior are *intrinsic* (or internal) to that order. It is not, perhaps, clear exactly what this means to say. But we can effectively contrast this view with the *supernaturalism* of Hesiod. On that view, the governing *logoi* of our world originate in and reside in another realm namely, the divine realm of the gods. As we have seen, this view represents a considerable obstacle to the human access to and understanding of the intimate workings of our world. Naturalism, on the other hand, implies that the governing principles of this world derive not from beyond it, but may be found within it. This, of course, makes more feasible the project of investigating this world's order.
- o In addition, we find the origin and development of idealism in the Pre-Socratic period. Idealism is the view that the nature or essence of reality is *ideal*, where this means (frequently) both "idea-like" and "perfect" or "perfectly good." Ideas are typically represented as non-material things that may or may not exist in

space and time. Numbers provide a good example of something often thought to be ideal in this sense. And numbers, too, may be thought to be ideal in the sense of best or perfect. Whatever the number four is, it isn't just an approximation of "four-ness", not just a part or portion of the concept of numbering four. Rather, the number four is, in this sense, the perfect realization of the idea of numbering four. Pythagoras and the Pythagoreans may be characterized as idealists, as may Heraclitus.

- Note that while naturalism is an important development in Pre-Socratic philosophy, there remain in Pre-Socratic thought elements of supernaturalism: thus the various characterizations of our world as divine or god-like.
- Note, too, that while naturalism implies that the governing *archia* of the universe may be discovered in it, these principles may be less than obvious, to the uneducated eye. Further, in some cases, there is some question as to the extent to which this world is knowable by us, for the Pre-Socratics. Xenophanes, for example, appears to assert an ultimate truth beyond human understanding (21B34; §13, pp. 27-8²). See further, below.

- Departure from the past

- O While the Pre-Socratics as a whole represent a striking contrast to the religious cosmology of the poets, this is not to say that the two groups did not share any views. As we have seen, Hesiod's cosmology has its rationalist elements, in particular the various logical relationships among the deities. And the Pre-Socratic philosophers were neither atheistic nor were they in every respect both rationalist and naturalist.
- Note, that the Pre-Socratics present *theological* accounts, naturalistic though these accounts tend to be. On Aristotle's account, Thales "thought all things are full of gods." (11A22; §7) Anaximander's *apeiron* principle is "divine", "deathless and indestructible." (12A15; §11) Note, too, that human access to the truth is limited, on some accounts. Philolaus contrasts divine with human knowledge (44B6; §6), as does Heraclitus (22B78; §42).
- O What have changed are the anthropological and supernaturalistic features of cosmology. The divine is no longer represented in human form: it is water, or the *apeiron*, or *aer*, or number, or the logical unity of opposites. Similarly, where these principles are *archia* and thus *logoi* and, in particular, *phusoi*, they are to be located *in* the physical world around us, not outside it in some alien realm. "God is day and night, winter and summer, war and peace, satiety and hunger," for Heraclitus (22B67; §81). God is increasingly *single* and *intellectual*, as well as *infinite*, *inexhaustible*, *eternal* a totality implying maximal universal logic. The gods of Hesiod, by contrast, are limited by their anthropomorphism; Heraclitus writes that Homer should be "flogged" for his accounts of the divine and their human weaknesses (22B42, §5; cf. Xenophanes, 21B11, §6).
- O A further difference is the development of a *prose* presentation of their accounts. Where the poets may include playfulness and the imaginative in their accounts of the gods, the Pre-Socratics invent the non-poetic prose style which involves the presentation of the theories and thoughts of a single individual for the benefit of a reading public. We see, then, associated with this trend an increased individualism in ancient Greek society as well as the increasing economic prosperity enabling leisure and wealth for literacy.

² Section and page numbers are to Cohen et al, *Readings in Ancient Greek Philosophy*, 4^e, Hackett Publishing Co., 2011. In most cases, I cite a D-K number followed by a section number. Section numbers will correspond to the section of Cohen et al devoted to the philosopher under discussion.

- Note, however, that we do not see at the same time an end or even significant change to the religious practices of the ancient Greeks. These practices continue. The Pre-Socratics did not, in general, produce cult followings; the cult of Pythagoras is a notable exception. However, while religious practice continued, theology increasingly became the province of *theologians*, not the poets, and so became increasingly theories answerable to the logical standards being developed by the Pre-Socratics. It is further notable that with the general loss of the anthropomorphic deity, god becomes impersonal, so that his/her/its interest in our affairs and welfare cannot be taken for granted.³
- In sum The Pre-Socratics were (largely) naturalistic and rationalistic in their philosophy.
 - O Their naturalism is expressed in their belief that the universe expresses a *phusis* it is a physical system obeying internal *archia* or principles.
 - O Their rationalism is expressed in their belief that the universe is wholly a *cosmos* informed by *logoi* capable of human understanding, so that it is to be investigated by *rational* or *logical inquiry* (argumentation) and sense observation.
 - They represent an extension but radical modification of the cosmogonic and cosmological myths of their poetic antecedents.

The Milesians

- The Milesians exemplify the Pre-Socratic philosophy, and were its originators.
- *Material Monism:* Thales, Anaximander, and Anaximenes all maintain that a single, material *arche* explains the nature of the universe. For Thales, this principle is *water*. For Anaximander, an ultimately indeterminate *apeiron* produces a substance which itself produces the opposites of hot and cold. For Anaximenes, it is *aer*, an ethereal substance like a dense mist.
- Note, here, the complexity of the Greek concept *arche*, which we translate 'principle'. To speak of water as an *arche* is to speak of both the substance, water, and also that which makes a substance *be* water, which we might call the essence of water. Water, in other words, is water because it manifests the water-essence. Moreover, the latter doubles as an intellectual entity: it is by reference to the idea of water, which captures water-essence, that we can understand what water is. This coincidence of an intellectual principle with a material essence is especially pronounced in Plato's thought. Note, in any case, that this duality is a feature of *logoi* generally: where a *word* (or idea or concept) expresses the nature of something other than a word (e.g., a stone, star, or flower), we have two kinds of thing (one conceptual, one material). Just exactly how the one (conceptual) expresses the nature of the other (material) is an on-going and deep issue in epistemology.
- A further complexity built into these "principles" of physical being is their dual role as *seminal* as well as *dynamical* and *physical* principles. A physical principle we may define as expressing the nature of a physical being. A dynamical principle would determine how such a being might change, in certain circumstances. And a seminal principle would explain the origin of a thing having that nature. (Compare, here, the Medieval Scholastic view according to which God carries the principle of his own being: the idea of such a thing is intended to include an account of why it exists.)
- Our three Milesians evidently knew and studied under each other. Anaximenes was a pupil of Thales, and Anaximander was a pupil of Anaximenes.
- Moreover, each successor appears to respond to problems in his predecessor in developing his own view, resulting in a *dialectic*. (As below.)

³ Following Walter Burkert, *Greek Religion*, Blackwell Publishing, 1985, here.

Thales

- The principle of material being is *water*. (11A12; §5)
- Observational evidence (as suggested by Aristotle): water nourishes life; certain hot things derive from water (compost, bodily warmth?); seeds contain water; nearly all things appear to contain some water (even stones may release oils when ground or compressed). (*ibid*.)
- Explanatory power: why the earth is at rest (because (a) it can float and (b) it "rests upon" water). By comparison, the earth could not rest upon air (it would fall through it). (11A14; §6) (Note the ambiguity of 'rests upon'. Does this literally mean sitting on top of water? Or does it refer to a more abstract relation of ontological dependence? The comparison with air suggests the former; but, as Aristotle's objection suggests, that interpretation faces the problem of what water rests on.)
- One passage suggests that Thales is a panpsychist. He appears to have argued that souls produce motion, giving the example of a magnet. (11A22; §7) Note here the connection to the ambiguity (i.e., dual status) of the logical as both concept and material principle.

Anaximander

- The principle of material being is something indefinite (*apeiron*) i.e., it lacks a determinate nature, but can produce determinate-natured things. This stuff either includes an internal principle of motion (change) or else in any case is in motion (changing), which results in its taking determinate forms, the hot and the cold. Both the hot and the cold are also moist.
- Critical merits: This theory is intended, evidently, as superior to that of Thales. Thales' account leaves unexplained how a determinate, basic stuff (water) can take on a different form, such as the dry (i.e., earth, stones, etc.). Anaximander's theory resolves this difficulty by having a single principle express itself in *opposite* forms (hot, cold) both of which are moist; the heat from the hot drives moisture from the cold, yielding the dry. Note, additionally, the conceptual unity of opposing forms, lending systematicity to the account.
- Anaximander's argument for the stability of the earth exemplifies the emerging importance of argumentation. In 12A26 (§17), he appears argue as follows: (1) There is no principled difference between upwards and downwards motion, or between motion to the left or to the right. Hence, (2) any overall (earth) motion in one of these directions would be arbitrary (i.e., without principled explanation). Further, (3) if there were reason (logic) for motion in one of these directions, then by (1) there would be reason for motion in the opposite direction, which is impossible. Hence, (4) there can be no overall motion in the earth i.e., the earth is stationary.
- Note, too, Anaximander's attempts to account for the relative sizes of heavenly bodies, for celestial motions and eclipses, and a mechanism for human evolution.
- Anaximander is also noteworthy for reputedly creating the first map of the entire world, as well as a map of the universe. See the course webpage for images.

Anaximenes

- The principle of material being is "aer", a dense mist. This substance is indefinite insofar as it can yield different stuffs such as the hot and the cold.
- Critical merits: Anaximander leaves unexplained how an indeterminate stuff could give way to determinate stuffs: the inclusion of an internal principle of change seems *ad hoc*; and otherwise the principle of change must be external to Anaximander's indefinite stuff. Anaximenes improves upon this difficulty by providing mechanisms for the production

- from his dense mist of the hot and the cold: the cold is a result of increased condensation; the hot is the result of rarefaction.
- Presumably, Anaximenes' *aer* is also in perpetual motion (though it is not clear that this is an improvement on Anaximander).
- Note the explanation for the stability of earth: it rides on a compression of air, being broad and flat; similarly for the other heavenly bodies. (Compare a paper falling through air.)

Pythagoras and Philolaus

- Pythagoras founded an important movement based upon mathematics, which evolved into separate, prominent movements. One of these, the *akousmatikoi* (from *akousmata*, sayings), focused on rules for practical life; the other, the *mathematikoi* (from *mathema*, study), developed theoretical accounts of metaphysics, mathematics, music, and astronomy.
- Pythagoras is known for founding this movement, and for maintaining doctrines such as the transmigration of souls (21B7, §1; 22B4, §4; 14.1, §7; 14.8a, §8; 14.8, §10) and eternal recurrence (14.8a, §8). Little else is known of his exact views.
- Aristotle attributes to Pythagoreans generally these views:
 - o That number is the essence of all being; (58B4, §17)
 - o That the One comprises the odd and the even; (58B5, §18)
 - That the unlimited (the odd) and the One are the ultimate subjects of predication, and thus the substance of being. (58B28, §19)
- The Pythagoreans generally conceived number as providing the harmony of the cosmos. (Sextus Empiricus; §16)
- Philolaus
 - Philolaus was a Pythagorean who was born after the death of Pythagoras. His writing constitutes an important resource on the Pythagoreans.
 - We see Philolaus argue obscurely concerning "limiters" and "unlimiteds". These are evidently the even and the odd, respectively, and Philolaus appears to argue that the cosmos necessarily consists of both combined in some form of harmony. (44B1, 44B2, 44B6)
 - Philolaus also asserts that numerical ratios are responsible for musical harmony (44B6a) and for the intelligibility of reality generally: nothing can be thought that lacks number (44B4)
 - The presence of number in things is said by Philolaus to reveal or signify itself to
 us, which we may take as an explicit assertion of the epistemological role of
 number: it is both fundamental to all things and open to human understanding.
 (44B5)

Xenophanes

- The fragments attributed to Xenophanes are notable for their rejection of the traditional pantheon of Olympic gods in favor of a single, unchanging and unlimited deity.
 - o See, e.g., §2/21B1.21-24, §3/21B11, and §7/21A12.
 - O And see §§4-6/21B14, 16, 15: Xenophanes poses an argument against anthropomorphism in the gods. Since it is ridiculous to suppose that there are gods in the shape of horses and oxen, and since horses and oxen would suppose there to exist such deities just as humans suppose their deities to resemble them, it is similarly ridiculous (and impious) to attribute human features to God.
 - o Thus, see §8/21B23, asserting the unity of God and rejecting his similarity to us.
- Also interesting in Xenophanes is the question of the knowability of God and the universe generally. He appears to assert that the ultimate nature of things is beyond our

- knowledge, where this pertains both to God himself and to the rest of the world around us. But he suggests that we can come to some approximate understanding of things, if by dint of effort. See §§12-14/21B18, 23, 24.
- Otherwise we find in Xenophanes a *phusikos*, offering naturalized explanations for empirical phenomena, such as clouds, the shining of the stars, the wind, and fossils.

Heraclitus

- Reality, change, opposition, and unity
- For Heraclitus, change is the *arche* of being: to be is to change, and to change is to be. Paradoxically, the only reality that does not change is change itself. I.e., if change were to change, it would become stasis; evidently, stasis is impossible (indeed, it is difficult to imagine; see Shoemaker, "Time without Change"). (This is not obviously a true paradox, but the application of a concept at different levels.)
 - See 22B84a (§55): "Changing, it rests." I.e., there is stability (of being, of being kind *K*) in change (of a certain kind). [Being a sheep, for example, involves undergoing certain kinds of change i.e., biological processes. As soon as these changes halt, the being of the sheep ceases i.e., the sheep dies. So, stability in the form of being a sheep consists in the continual change constituting its life. I.e., stability, being, reality, consists in continual change.]
- Change inherently involves opposition, and in a number of forms.
 - Change itself involves two forms: change in properties (alteration), change in constitution.
 - O Change in properties is perhaps the simplest form, involving transition from x's being P to its being not-P (or vice versa). E.g., the cold stove becomes hot (= not cold); the hot stove becomes cold (= not hot). ($\S80/22B126$; cf. $\S52/22B36$)
 - Other forms of change involve the *constitution* of a thing: the water making up a river is continually changing, as is the material making up a flame. (§39/22B12; §45/22B30) The opposition in such cases is that among constituents: now one set or quantity constitutes the object; then another. In this connection, see the paradox of the Ship of Theseus.
 - Fire seems a special case, here involving *consumption* (destruction) of one thing to create another (§51/22B76a).
 - We also find apparent opposition in these forms:
 - * $x ext{ is } P ext{ and } not-P. (§68/22B60: the road up is the road down.)}$
 - * *x* is *P* to *a* and *not-P* to *b*. (§69/22B61, §70/22B82, §71/22B13, §72/22B9, §73/22B4, §74/22B37, §76/22B83, §85/22B58, §67/22B59)
 - Absolutely: sea water is good for fishes, bad for humans.
 - Relatively: a human is wise (and beautiful) with respect to an ape, but an ape in comparison with a god.
 - ♣ P = not-P. (§79/22B103, §66/22B48, §7/22B57) I.e., a particular state or condition or object is identical with its opposite (in some respect or with respect to different things). E.g., the beginning and end point on the circumference of a circle (B79).
 - ♣ *P* if and only if *not-P*. (§83/22B23, §84/22B111) I.e., a particular state or condition or object is possible (or conceivable) only insofar as its opposite is also possible (or conceivable). E.g., justice is conceivable only where injustice also exists (or is possible). Cf. disease/health, hunger/satiety, weariness/rest, war/peace.
- Unity of opposites: Heraclitus seems to suggest that change (or reality or truth) involves the unity or unification of opposites. There is a conceptual point, here, as well as a metaphysical one.

- Oconceptually, a thing and its "opposite" constitute a *plenum*: all reality divides into the classes *fish* and *non-fish*, for example. See §81/22B67: "God is day and night, winter and summer, war and peace..." These combinations of opposites serve to parse the whole of reality ("God") several times over. And §60/22B10: "Things taken together are whole and not whole..."
- o Further, in conceptual terms, we can understand a thing only if we can also understand its opposite: justice is knowable only insofar as we recognize injustice. (§83/22B23) I.e., the *P*, *not-P* opposition constitutes the unity that is understanding of the given concept.
- o In metaphysical terms (i.e., concerning the structure of reality, as opposed to how we think about it) a given change (or being) is a single change (or being) only insofar as some opposition is or has been achieved.
 - \clubsuit Diachronically: at one time, x is P; at another, it is *not-P*. E.g., completion of change from hot to cold.
 - ♣ Synchronically: *x* is *P* and *not-P* at the same one time. E.g., the bow, which exists as such only when one force (from the bent wood) is counterbalanced by another, opposed force (from the tension of the string). Here, existence involves a tension between opposites. (See §66/22B48, §61/22B51.) Cf. the tension in the fire, whose fuel must be replenished even as it is exhausted.
- Paradox? Although much of what Heraclitus says sounds paradoxical, there appears to be sensible content to much of what he says.
 - An actual paradox would result in confusion or nonsense, insofar as a paradox entails contradiction.
 - ♣ E.g., fragment §68/22B60: but even here, the opposed up/down motions are in respect of travel in different directions. It makes no sense to say, 'The car went up at the same time, in the same respect, as it went down.' But here Heraclitus needn't be interpreted as saying *that*. Rather, the point seems to be another conceptual one: *up* is intelligible only insofar as there is a *down*, and vice versa.
 - This is generally the case, with Heraclitus: that opposites exist not in the same respect, but in differing respects, or in different things, or at different times.
 - o However, this is not to deny the general claims concerning unity of opposites, in both conceptual and metaphysical form.

Flux: How much change?

- A Doctrine of Flux asserts that all things exist in a state of continual change.
- Extreme Fluxism: everything changes in every respect at every moment.
- Moderate Fluxism: everything changes in some respect at every moment.
- There is some question concerning whether Heraclitus was a moderate or an extreme fluxist. Plato seems to read him (or his followers) as an extreme fluxist, in at least one place (see *Theaetetus*). However, a charitable reading of Heraclitus allows the more moderate position.
 - o Certainly fragment §55/22B84a is most naturally read this way: "Changing, it rests."
 - And the famous river fragments (§§39, 40/B12, B91a, b) makes sense only supposing that the river does not change its identity, but only its constitution, from moment to moment.