Introduction

The Presocratics introduced a new kind of wisdom to the world. They appeared suddenly in the sixth century BC as sages who wanted to explain, not just this or that fact or custom or institution, but everything at once. They began as students of nature, who took nature as a independent realm to be understood in terms of its own capacities. In their time of mythical and magical thinking even the very concept of nature was stunningly new and unprecedented. They gave birth to two important disciplines that have characterized Western thought ever since: philosophy and science; the former perhaps more fertile in future developments than we usually imagine today, the latter less imposing than it would become in modern times, but certainly at the center of their project. They wrote the first learned treatises and pioneered the concepts we take for granted today. In time their works were lost and their ideas obscured by later developments, but from an early time they were recognized as the founders of a new way of thinking about the world and relating to it.

1. Who they were

Ancient scholars agree that philosophy began with a movement in Miletus, a cosmopolitan port city on the eastern shore of the Aegean with numerous daughter colonies and trading partners throughout the Mediterranean allowing for contact with the great civilizations of Egypt, Mesopotamia, and Anatolia. Thales, then Anaximander, then Anaximenes of Miletus began to think about the world in a new way, to philosophize, as later generations would say. Thales said all was water. Anaximander wrote the first philosophical treatise, showing how the world arose out of some boundless reality, and Anaximenes added to his theory an account of elemental change and an argument for the primacy of air over other substances. All of them explained the world as we know it as a result of natural processes acting on everyday stuffs.

If their theories seem to us simplistic, it is because our knowledge of nature has increased exponentially since their time. But it was their lisping expressions, as Aristotle pointed out, that raised the possibilities of a rigorous knowledge of the world in the first place. Before them, poets explained the events of the world as products of supernatural actions of divine agents. At the beginning of the *Iliad*, Apollo rains arrows upon the Danaans, and Homer mentions in passing that this is a plague. Elsewhere Zeus throws thunderbolts and Poseidon causes storms. The sun is a god Helios driving a golden chariot across the sky, and the

rainbow is the passing of the goddess Iris. Calamities like the plague are caused by angry gods, and they can only be stopped by appropriate acts of propitiation. The great civilizations of Babylonia, Egypt, and Persia, more highly organized and technologically advanced than the Greeks, had different pantheons but employed similar kinds of mythological explanation.

What was new, even shocking, about the Presocratic approach was that it gave no direct credence to traditional lore. The philosophers simply ignored the kinds of explanations that were imbedded in myths and advanced their own accounts on the basis, not of tradition, but of reasons. These reasons had nothing to do with the actions and motivations of divine beings with supernatural powers. They presupposed only mundane substances with natural powers. Clouds arose from rising vapors, not from the action of the Cloud-gatherer (Zeus). Thunderbolts resulted from wind bursting out of a cloud, not from Zeus' action. Earthquakes were caused by the motions of a subterranean sea or the drying and cracking of earth, not from the shaking of Poseidon. The world of nature was an autonomous realm with its own elements, powers and behavior, which was governed by universal rules. Indeed the word for nature, *phusis*, seems to have originally been applied in the sense of the nature peculiar to any kind of body, which gradually led to a conception of Nature as the totality of such natures. What the new approach brought was a conception of nature as the possible object of knowledge that could arise from observation and inference alone, independent of tradition or revelation. To understand the events around them, the philosophers needed not theology but science.

No doubt every contemporary of the Presocratics knew much the same about everyday events as the philosophers: fire cooks meat and boils water, rain comes from clouds and hail from thunderclouds, the sun heats the earth. What was different about the philosophers' approach was their refusal to allow any supernatural actions to govern natural processes. The rejection of the supernatural, however, did not make the philosophers atheists. Rather, it made them subordinate divine action to natural law, or, in some cases, to combine the divine with the natural – to invest natural principles with divine attributes. Ultimately it led to a penetrating criticism of conventional religion, most prominently by Xenophanes, as all too human, and pointed the way to a more refined conception of deity. The gods of Homer were, after all, divinities behaving badly, and critical reflection demanded much more from them than did traditional religion.

For the Presocratics, the world was a product of lawlike interactions of natural substances. Many of them provided a cosmogony in which they told how the world we know arose from a primordial state of uniformity. The world arose, not *ex nihilo*, but from a redistribution of matter, a *diakosmēsis*, in which the familiar features of the world appeared. The world processes of the present world were then described, often including an account of seasons, weather, plants, animals, and human beings. The Presocratics thus explained the origin and present composition of the world, and almost everything in it. They offered a

comprehensive account which would explain everything from heavenly bodies to human society.

If the Presocratics rejected traditional explanations, they remained nonetheless indebted to traditional ways of thinking and acting. There is a fair amount of continuity between the mythical cosmology of Hesiod (evident also in sketchy accounts in Homer) and the speculative cosmologies of the Presocratics. The world envisaged by most Presocratics – a flat disk-shaped earth with a firmament of heaven above and perhaps an underworld beneath – had much in common with Hesiod's traditional conception. Furthermore, the very type of explanation which predominated in Presocratic accounts, namely a story of how the world came to be, is anticipated in Hesiod's *Theogony*. To be sure, Hesiod's tale is about the birth of cosmic gods, while Presocratic accounts are about natural processes. But the crucial explanation aims to tell where the present world came from and how it got to be as it is. There are also indications that in studying the world, the philosophers used the simple instruments available from neighboring cultures, the gnomon or vertical rod in the ground, the sundial, the klepsydra or pipette, the column drum. Nevertheless, their ideas were relatively free from traditional constraints, and they put old ideas to new uses and developed novel arguments for and against models they in part borrowed.

The fifth century BC also began with a sustained critique of cosmology itself, and an approach to a more logical and metaphysical way of thinking in place of an almost exclusive concern for naturalistic accounts and physical models. And the century ended with more radical rethinking in the form of relativistic and humanistic approaches to experience. The atomists developed a theory that would continue to inspire research until it displaced all others with the authority of experimental science. All this showed that the new philosophy was not stagnant or complacent, but quite capable or reinventing itself in surprising ways.

Only in the early fourth century, with the rise of the Socratic schools and their personal approach to moral self-knowledge – and their contempt for abstract speculation – did the early style of philosophy fade out. And even then, many of the advances of early philosophy were incorporated into Socratic philosophy.

2. Schools and movements

One thing that is striking about the Presocratics is how unique each of their theories was. The Presocratics do not easily fall into schools as do the Hellenistic philosophers. Indeed, though later generations grouped them into schools, the notion of a school is anachronistic for this early time. In the time of the Presocratics there were no formal institutions of learning, but at best only informal associations between a master and his students, so far as we can discern. Later Greeks had several competing ways of grouping the Presocratics. There were the eastern Ionians vs. the westerners, which in modern times have been roughly mapped to the scientific vs. the mystical thinkers; the natural philosophers vs.

the opponents of natural philosophy; the monists vs. the pluralists; and finally the several "schools": the Ionians, the Pythagoreans, the Eleatics, the atomists. All of these groupings have advantages and drawbacks. The advantages are that there is usually some interesting correlation among members of each group. The drawback is that none provides more than a superficial correlation. Some of the leading westerners are immigrants from the east (Pythagoras, Xenophanes), and at least one may have never actually lived in the west (Melissus). At least two alleged opponents of natural philosophy provide extensive theories of natural philosophy themselves (Xenophanes, Parmenides). Of alleged monists, several are highly suspect (Anaximander, sometimes classified as a pluralist even by Aristotle; Xenophanes, variously classified as a monist, a dualist, a pluralist; Heraclitus; even Anaximenes and Parmenides are controversial); of pluralists some are problematic (Empedocles plays with both the one and the many; Anaxagoras has been seen as a metaphysical dualist; the atomists can be seen as monists, dualists or pluralists). Of the schools, only the Pythagoreans offer some sort of society, and with them it is not clear whether religious association entailed intellectual transmission or orthodoxy. Of the Eleatics, only Parmenides and Zeno are likely to have known each other. The Ionians include one group of possible associates, the Milesians, but most of the others probably did not know each other. Some figures seem to fit into no groups (Heraclitus was famously misanthropic) or into too many groups (Empedocles combines Pythagorean, Eleatic, and Ionian tendencies). The sophists for their part include cosmologists (Antiphon) and anti-cosmologists (Gorgias), easterners and westerners, realists and anti-realists.

In view of these problems, it seems risky to provide an a priori classification of the Presocratics (as e.g. KRS does). I have made some minimal concessions to school connections: Zeno after Parmenides, Leucippus and Democritus together (since they are seldom distinguished by sources). And I have grouped the cosmologists and their opponents together, as against the sophists, who can be distinguished by their professional activities, which focus on a practical and anthropocentic curriculum. There is one historical development which has proved fairly robust: Parmenides' criticisms seem to have made a notable difference in the discussion of philosophical problems. What precisely his criticism was, what it was directed against, and what its effect was have become increasingly controversial. But that he made a difference is not in question. Thus Parmenides has emerged as the watershed figure in early Greek philosophy, and historically philosophy can be divided into the pre-Parmenidean and post-Parmenidean – roughly, the sixth century and the fifth century, since Parmenides wrote at the beginning of the fifth century. He influenced the sophists no less than later cosmologists with his discussions of what-is and what-is-not, and cast a shadow over all later philosophy.

In broadest terms we can identify four movements in early Greek philosophy. The earliest was an attempt to explain the cosmos, its origin, nature, and phenomena in a quasi-scientific way. This movement led to a reaction among the so-called Eleatics that produced an anti-cosmological movement that challenged the

possibility of explaining changeable phenomena, giving rise to a kind of metaphysical analysis. Subsequent cosmologists took account of Eleatic criticisms, though they may have read Parmenides in particular as a revisionary cosmologist rather than as an anti-cosmologist. Finally the sophistic movement of the middle and later fifth century focussed on human concerns and practical education. Often attacked by Plato and his followers as mercenary teachers of success seminars, the sophists are perhaps more generously understood as the first promoters of higher education. They taught political science and oratory, and in general prepared their students to participate effectively in the nascent democracies of the time. Many of them also pursued cosmological interests, dealt with Eleatic arguments, and also extended inquiry into new areas of social studies and linguistics. They were the first humanists and social scientists.

It should be noted that there was no standard name for philosophers before the fourth century. Plato, Aristotle, and their rival Isocrates distinguished between "philosophers" (good) and "sophists" (bad) in the fourth century, but their distinction was a novel one, unknown to previous centuries. Aristotle refers to the cosmologists as *phusikoi, phusiologoi*, and *meteōrologoi.* He speaks of "the first philosophizers," *hoi prōtoi philosophēsantes* (*Metaphysics* 983b6) generically in a non-technical way. We see no clear indication that the first philosophers had any particular name for themselves (since neither *philosophos* nor *sophistēs* had yet acquired a specialized meaning). Yet they clearly took part in an increasingly peculiar debate that was recognized by other groups such as medical writers as a sort of professional discourse. With or without a name, they emerged as a force to be reckoned with. And increasingly philosophers, whatever their affiliations, had more in common with each other than they did with non-philosophers.

If the affiliations of philosophers were not clear, neither was their precise chronological order. But I have in general ordered the philosophers according to our best information as to their activity. I hope that this order will tend to invite rather than to obstruct comparisons among the figures.

3. Texts and contexts

The Presocratics were pioneers in writing. Anaximander was one of the first if not the first thinker to write his ideas down in a prose composition, at a time when reading was a relatively new art in Greece and writing materials were dear. In fact his treatise started a whole genre that came to be known by the title *Peri phuseōs, On Nature*. The title itself emerged only in the late fifth century when books began to carry titles. But it indicated the kind of cosmogony/cosmology that early philosophers favored. Early works *On Nature* were probably short summaries of a life's work of thinking and perhaps teaching, usually in a single book, or papyrus roll. They became scarce and were often hard to find even for ancient Greeks after Aristotle's time. They have disappeared completely, except for reports about them ("testimonies") by ancient sources and quotations ("fragments") imbedded

in other works or in a few surviving scraps of manuscript. The task left to a modern reader is to reconstruct from these *disiecta membra* an understanding of the original thought – no small challenge.

Reconstructions must begin with evidence, which consists of a set of texts passed down from antiquity. Before the invention of the printing press in the fifteenth century AD, all books had to be copied by hand and recopied generation after generation as the writing materials (papyrus or parchment) deteriorated, if they were to survive. Because of the cost of the materials and the man-hours required for copying, books were relatively expensive and scarce. Over the long term, the survival of books depended on the tastes of readers and the chances of history. From the fourth century BC on there were public libraries. Eventually the libraries of Alexandria in Egypt and Pergamon in Asia Minor became the largest and best stocked in the world. There were notable libraries in Athens, Rome, and other parts of the Mediterranean world. Eventually the great libraries perished, and smaller public and private libraries had to supply manuscripts.

Because every ancient text is a copy of a copy of a copy, and so on, errors can creep in at every stage. Surviving manuscripts disagree at some points and the original text itself must be reconstructed from the variant readings. Editors of texts bring considerable knowledge and skill to the work of producing a critical edition, but ultimately the texts before us are only approximations of the original. In the texts of this collection will be found the more important variant readings, in footnotes, which can provide clues to other interpretations than the one adopted.

Even with a reliable set of texts in front of us, the work of interpretation is just beginning. The challenge is to understand the thought of a thinker who lived far away and long ago in a foreign culture speaking a foreign language. To the ancient Greeks we would count as barbarians, strangers to their language, customs and culture. We need somehow to understand their world and their concerns. The testimonies of ancient interpreters are a help, since their authors had some knowledge of the Presocratics, and some of them (but not all) enjoyed access to their complete writings. On the other hand, most of them lived at least a century after the thinkers they were writing about, in a different time and under different historical conditions, if still in the same broad cultural community. Furthermore, they were neither so conscious of historical changes of perspective nor so scrupulous about responsible reconstruction as are modern scholars. So they were liable to misunderstand their predecessors.

That is why fragments are important: to allow us to check what ancient interpreters say about the Presocratics against their own sayings. When we do that, we sometimes find reasons to doubt later interpretations. In other words, we can sometimes correct ancient misconceptions on the basis of careful reconstructions of our own. On the other hand, we must be aware that fragments can be misquoted, misattributed, and taken out of context. Nevertheless, the more material we have of the original author, the more confident we can be that we can control the secondary reports and make a plausible reconstruction of our own.

There has been some recent controversy about the extent to which the context we find the fragments in can help us understand them. Some scholars have recommended leaving the fragments imbedded in as much context as possible so that we can discern the purposes of the author who quoted them and sometimes glean further information about how the fragments were connected. Certainly this is in principle what we should always do in studying the fragments. But the reality is that often the contexts are not very helpful for understanding the fragments themselves. The real challenge for the philosopher has always been how to see the forest for the trees. With too much context, the reader tends to get lost in the underbrush without the ability to emerge and see the whole landscape. Consider an analogy with archaeological practice: some gifted archaeologists might prefer to see the potsherds in their original matrix, but most students would find it much more helpful to see them reconstructed into a pot.

On the other hand, without any context, the fragments tend to lose any connection with each other or with any possible interpretation. The traditional way of presenting the fragments (pioneered by Hermann Diels) is to present a set of testimonies (his A-texts: A1, A2, etc.), followed by a set of fragments (B-texts) extracted from the former. This procedure keeps testimonies and fragments clearly separated, but it tends to leave the fragments unconnected from each other and from unifying accounts. What I have done here is to combine testimonies and fragments into a global order, distinguishing the fragments (or possible fragments in some cases) by putting them in boldface type. I risk misleading the reader into thinking my order is the right one when it may be mistaken. Still, I think one can do more with a mistaken order than with a random one (such as Diels intentionally used for Heraclitus). So in the collections the testimonies provide some kind of context for the fragments, which in turn provide some kind of evidence for the testimonies. I could have provided more context, but at the risk of focussing attention on the secondary source rather than the primary author. So this collection remains closer to Diels' project than some scholars would like, but I hope it will prove itself in being the more accessible to the lay reader.

4. Sources for the Presocratics

Our knowledge of the Presocratics comes through ancient secondary sources who have their own attitudes to and interests in the Presocratics. I shall discuss them under four headings.

4.1 Philosophers

Later philosophers have their own philosophies to advance. They tend to look at the Presocratics as predecessors who were engaged in a common project, and who may be either allies or antagonists in an ongoing debate. Plato is the first philosopher of whom we have extensive writings (in fact all of his known

writings are extant). He writes not as a historian, and not even as a straight philosopher, but as an author of literary dialogues, usually with Socrates as chief spokesman. Presocratic figures generally come in as partisans to a debate, for instance Heraclitus and Protagoras in the *Theaetetus.* Plato is usually content to refute them as part of the ongoing argument. In the *Theaetetus*, however, he has Protagoras stand up for himself and criticize Socrates for creating a straw man (166–68). For the first time in the extant literature a philosopher makes a plea for a charitable statement of an opponent's view, part of the ethics of philosophical discussion that is still our ideal. Nonetheless, such care for an opposing position is the exception rather than the rule in antiquity.

Aristotle writes treatises rather than dialogues (to be more precise, the literary compositions he wrote are lost, while his lectures or school treatises have survived). In them he divides up areas of knowledge into disciplines and often begins with a search of the literature, in which he reviews previous theories on a given subject (e.g. *On the Soul* I), often including a generous treatment of Presocratic views. He never treats his predecessors' theories as ends in themselves, but he does take them seriously and respond to them, sometimes carefully, sometimes summarily. In fact, he makes it a point of procedure that the philosopher should evaluate and respond to previous positions, "for the solution of a [dialectical] problem is a discovery" (*Nicomachean Ethics* 1146b7–8; cf. *Topics* I.14).

Aristotle's student and colleague, Theophrastus, took his master's method to extremes and published a sixteen-book compendium, *Doctrines on Nature*, at least partly organized in a dialectical way dealing with opposed opinions. The opinions were probably divided up by topic and set side-by-side with competing views on a given narrow topic. The point of this exercise seems to be to produce a dictionary of ideas for any occasion.

4.2 Doxographers

This brings us to a new genre of writing, the "Doxography" (a word coined by Hermann Diels from Greek roots). Given the difficulty of reproducing books and the apparently lively market for dictionaries of ideas, abbreviated versions ("epitomes") of Theophrastus' work remained in circulation until late antiquity. Apparently there was already one in the early third century BC, that has been called by modern scholars *The Earliest Doctrines* (*Vetustissima Placita*); another around the first century BC known as *The Early Doctrines* (*Vetusta Placita*), and another in the first century AD, the *Placita* of Aëtius. Each time the work seems to have gotten shorter, but to have included the next generation of philosophers. Aëtius' version was further excerpted by pseudo-Plutarch and imbedded by Stobaeus in his massive *Anthology*. The core material of these collections goes back to Theophrastus, but new material is grafted in as well. The continued existence of doxographical collections indicates the lasting demand for such works. Indeed, John Stobaeus (fifth century AD) seems to have thought a multi-volume anthology was the ultimate educational resource, and inflicted his collection on his hapless

son. It is quite possible that most of the authors of these digests had little more to go on than earlier digests and cribs (Stobaeus was an exception), so the information steadily deteriorated over time. Still, given their pedigree, the *Placita* collections convey valuable information.

4.3. Biographers

Another genre that appeared after Aristotle was the intellectual biography. Aristotle's student Aristoxenus wrote some biographies of philosophers, and in the second century BC the Peripatetic Sotion wrote a *Successions of the Philosophers* in thirteen books. While it was relatively easy to get biographical material on Plato or Aristotle, the Presocratics presented problems. Scraps of information, anecdotes, and fabrications had to do. Philosophical biographies were filled out with doctrines taken from doxographies. But whereas in standard doxographies opinions were divided up by topic, the biographer had to go through a doxographical handbook and pull out each doctrine belonging to a given philosopher and reassemble the collection, giving an impression of a philosophical survey. This method, however, did not assure any systematic exposition, but only juxtaposed minimal doctrines. The great collection that survived antiquity was that of Diogenes Laertius, a biographer of the early third century AD, who is more of a cut-and-paste hack than a scholar. Still, in the ten books of his *Lives of the Eminent Philosophers* he preserves priceless information, along with misinformation, slanders, comic lampoons and bad verse.

4.4. Other sources

Other kinds of writers sometimes provide information about the Presocratics. The historian Herodotus is aware of Presocratic theories and enters into one of their debates. The orator Isocrates is aware of the major theories of the Presocratics, which he criticizes as irrelevant to important concerns. Philosopher and essayist Plutarch provides some important information about several Presocratics. Commentators on Aristotelian texts sometimes fill out references to the Presocratics with background information. By far the most important is the sixth-century AD commentator Simplicius who quotes extensively from rare books of several Presocratics. In general educated people seem to have had a superficial knowledge of the sort preserved in doxographies of the Presocratics, but only a few studious individuals knew more than what was passed on in summaries.

5. Historiography

5.1 Antiquity

History is a complex art, not merely a habit of passing on old information. We philosophers take it for granted that the history of philosophy is an important

component of a philosopher's knowledge. In antiquity there was no real history of philosophy. Plato is often merely playful in dealing with earlier theories. Aristotle's *Metaphysics* I comes about as close to history of philosophy as we can find, and it is indeed valuable. But it is part of Aristotle's vindication of his own method, not a disinterested study of past theories, and it focuses narrowly on theories of causation or explanation. Yet we find in both Plato and Aristotle schematic treatments of predecessors that seem to be inherited from earlier writers: monists vs. pluralists, advocates of motion vs. advocates of rest, and the like. These appear to derive from the sophists Hippias of Elis and Gorgias of Leontini. So there was a kind of proto-doxographical tradition even before Aristotle. Theophrastus continues pigeon-holing philosophers, and much of subsequent study consists merely of crude classifications of particular doctrines. Some of Aristotle's followers wrote critical works of *historia* such as Eudemus' work on astronomy, which sometimes detailed the first discoveries of phenomena; but here *historia* is not "history" but something like a general investigation: his *Astrologikē historia* is *The Study of Astronomy*, probably more a dialectical than a historical treatise.

Hellenistic philosophers breathed new life into the study of Presocratic philosophy. Epicurus built his theory on the foundations of Democritean atomism, though he tended to be critical rather than admiring of his atomist forebears. Zeno and Cleanthes borrowed Heraclitean physics for their Stoicism, and Cleanthes wrote a monograph on Heraclitus. Skeptics found Xenophanes and Democritus, and sometimes Heraclitus, to be congenial forerunners. Pythagoras was rediscovered, or perhaps reinvented, by neo-Pythagoreans and neo-Platonists, and Parmenides was much admired by the latter. The emperor Tiberius' astrologer royal, Thrasyllus, did an edition of Democritus' extensive writings. Yet it is seldom clear how well later thinkers understood the systematic views of their predecessors.

5.2 The Middle Ages and Renaissance

In the fifth century AD the western half of the Roman empire was overrun by barbarian invasions. Meanwhile the eastern half continued with its capital in Constantinople (Byzantium) as what we now call the Byzantine Empire. Greek was still spoken and written, and the study of ancient philosophy and literature continued. In addition, there were still Greek-speaking communities (descendants of early Greek colonies) in southern Italy and Sicily through the Middle Ages. In the Middle East Arab tribes were unified by the religion of Islam and conquered a huge area from the borders of India to Morocco and Spain. Islamic scholars translated many works of Greek science and philosophy into Arabic, often from intermediate Syriac translations.

In western Europe, civilization collapsed over time, and monasteries and religious institutions became the main centers of education and book-making. The Latin language was preserved as the language of church communication and liturgy as local dialects and languages replaced the mother tongue. Greek, which all well-educated Romans learned from childhood, was forgotten after the