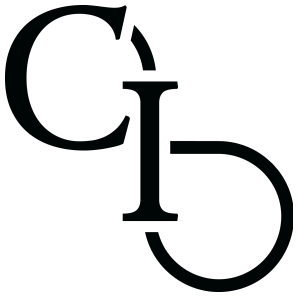
History of Ideas
Module 1

Ancient Greeks: Thales of Miletus

Logan Chipkin



CONJECTURE UNIVERSITY

Ancient Greeks: Thales of Miletus

In our post-Enlightenment age, it's easy to take progress for granted. Our scientific theories become ever deeper, our technology ever more empowering, our moral ideas ever more sophisticated. Not many generations ago, our ancestors thought that the Sun revolved around the Earth, rightly considered a full belly and robust shelter to be luxury items, and held attitudes towards their fellow man that we now regard as cruel and irrational.

That progress occurs at all is not guaranteed—and indeed, humanity made little or no progress for most of its time on Earth. Why *did* people begin to make progress? More generally, what ideas, institutions, and processes are required for progress to take place at all?

Our story begins in the seventh century BCE in the Greek city-state of Miletus, where philosopher Thales was set to discover several of the ingredients humanity required to make progress henceforth.

Although he left no writings of his own, subsequent Greek philosophers—such as Plato and Aristotle, both of whom we'll encounter again—routinely referred to Thales' ideas. The so-called Pre-Socratic philosopher's intellectual contributions ranged from mathematical theorems to calculating the dynamics of the equinoxes to predicting eclipses. All of these discoveries were *ontological*—that is, they improved our knowledge about what the world is like.

But none of Thales' ontological contributions hold a candle to his *epistemological* contributions—how and why knowledge grows in the first place (see our People, Reason, and Reality Course). Because of the intimate connection between the growth of knowledge and the possibility of progress, Thales' epistemological discoveries empowered subsequent thinkers themselves to make progress that would otherwise not have been possible.

In Thales' time, dogmatic adherence to the prevailing wisdom was the informal law of the land. One dared not question the explanations of how the world worked—it was

simply so. With respect to inhibiting progress, that these explanations were mythological was less significant than the fact that they were dogmatically held.

One of Thales' great epistemological discoveries was that progress requires a *tradition of criticism*, which he concretized in the founding of his famous Milesian School. The culture of his school was an epistemological achievement in its own right, as pupils regularly *criticized* the ideas of their masters in an effort to improve them. Thales' own student, Anaximander, rejected some of his teacher's ideas in favor of his own. It may well be that the Milesian School was the first institution built precisely for the purpose of *argument* in pursuit of the truth.

No singular ontological discovery could have done such a thing. If all Thales did was create a novel mathematical theorem, then it may well have spread across ancient Greece. But the theorem would have lent itself to progress only in problem-situations to which the theorem applied. Like the fruit of a tree, the theorem would have been eaten and done with.

But Thales' epistemological discovery of a tradition of criticism was the creation of an entire—and potentially immortal—fruit tree.

As Patricia F. O'Grady writes in *Thales of Miletus*, "Something extraordinary, astonishing and momentous was happening, and its birthplace was Miletus. It is an historical fact that the hypotheses of the Milesians were soon followed by a plethora of bold, creative theories from men of originality, courage, outstanding perception and, sometimes, of astonishing absurdity."

(As an aside, it's entirely plausible that Thales made this discovery *unintentionally*. He may have never been conscious of the fact that he'd established a tradition of criticism in creating his school, nor of its significance in allowing for unending progress. *Understanding* the importance of a tradition of criticism is not the same as 'merely' creating one.)

Less significant than Thales' discovery of a tradition of criticism but still a crucial ingredient for progress was his rejection of supernatural explanations in favor of naturalistic alternatives. While his Greek contemporaries were satisfied in attributing the caprices of the world around them to the actions of the gods, Thales found these wanting (though he may not have been able to articulate *why* supernatural explanations were inferior to naturalistic ones). Thales' view that the world could be explained

naturalistically—so-called *materialism*—is one that most modern scientists now take for granted.

As O'Grady writes, "Thales made a distinct break from the mythical ways of describing the universe to a scientific explanation. It was the beginning of science."

For instance, the Greeks attributed earthquakes to the mood swings of Poseidon, god of the sea. Thales conjectured that the Earth floated on a body of water, and that earthquakes were caused by the Earth's swishing and bobbing around, much as a ship does at sea.

We now know that the content of Thales' hypothesis was mistaken. Our planet does *not* float on water but rather travels across empty space. And earthquakes aren't caused by the Earth's movements relative to some external frame of reference at all, but rather by the *internal* dynamics of subterranean plates and fault lines.

Yet in proposing this false idea, Thales inched towards a *true* aspect of reality, a crucial ingredient for scientific progress, namely that all phenomena can be explained without reference to the supernatural.

Nor did Thales restrict his materialism to earthquakes. He *universalized* the idea to all phenomena via the principle that 'water is the source of all things'. Thales conjectured that the regularities around us were not caused by supernatural, alien entities, but rather by a fluid that could itself be studied, probed, and understood. Once again, the explicit content of the principle is wrong, but the implicit assumption that the universe is materialistic underlies the whole of modern science.

Finally, the very notion of a *principle* was a bold innovation (see our Constructor Theory Course). In taking seriously that seemingly disparate phenomena could be accounted for via the same universal explanation, Thales must have taken for granted that reality was a unified, comprehensible whole. Nowadays, this is obvious to most Westerners—for instance, the principles of general relativity apply to *all* massive objects, and those of economics apply to *all* purposeful action (see our Economics Course). Once again, Thales may not have even *explicitly* appreciated the role that principled thinking necessarily plays in fundamental science (in fact, our own understanding of the role that principles play in science has evolved). Nevertheless, it was Thales who brought the notion of principles to the fore of philosophy.

With his advent of a tradition of criticism, materialism, and the notion of universal principles, Thales gave every subsequent philosopher and scientist indispensable tools of reason that have lasted for thousands of years. From everyday life to scientific research, these tools are so baked into the modern mind that we rarely appreciate them for the revolutionary discoveries that they are. It is thanks to Thales that we deploy them as easily as we draw breath.



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