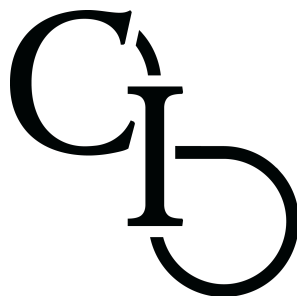


Civilization

Module 5

Tradition of Criticism

Logan Chipkin



CONJECTURE UNIVERSITY

Tradition of Criticism

In Module 2, we described ancient Sparta as a paradigmatic example of a static society—that is, one dominated by institutions and memes that entrench ideas, suppress creativity and criticism, and direct people’s thoughts, values, and actions towards keeping things the same rather than changing them. Such societies had (and contemporary static societies still have) *traditions*: parents passed down norms of familial life to their children, priests passed down the tenets and rituals of their religion, and toolmakers passed down knowledge of their craft from master to apprentice. Crucially, these traditions were traditions of *preservation* and *obedience*—children were expected to emulate their parents in the succeeding generation, students of priests earned status to the degree that they kept the religious institution unchanged, and craftsmen’s apprentices were punished for diverging from their master’s (often verbal) instruction manual and rewarded for adhering to the script.

Many historians consider seventh- century philosopher Thales of Miletus the first scientist due to his groundbreaking rejection of supernatural explanations in favor of naturalistic alternatives. While his Greek contemporaries were satisfied with attributing the caprices of the world 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). His view that the world could be explained naturalistically—so-called *materialism*—is one that most modern scientists now take for granted, but it marks what might have been humanity’s first turn from mythological explanations to a more scientific worldview.

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 toward 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.

Yet despite all of the aforementioned scientific and philosophical innovations, Thales' most important contribution was perhaps the world's first-ever *tradition of criticism*. He encouraged his students not to blindly accept his teachings, but to criticize them and retain only those ideas of which they had been persuaded. And so it was that one of Thales' students, Anaximander, accepted Thales' idea that the world should be explained in materialistic terms but rejected his particular cosmology. Anaximander rejected Thales' 'all is water' principle, arguing that no single substance could compose every physical system—for instance, how could water constitute something like fire? He proposed the so-called *apeiron* to play the role that water did in Thales' cosmology. Unlike water, Anaximander's *apeiron* had no familiar attributes like color, weight, or texture but was rather an indefinite substance out of which any specific substance or attribute could emerge—whether fire, water, or anything else. Anaximander also criticized Thales' hypothesis that the Earth floated in water, arguing that this led to an infinite regress—after all, what held the surrounding water in place? Anaximander conjectured that the Earth required no support to remain stationary in the first place, since it was perfectly distant from everything else in the universe and so had no 'reason' to move in one direction or another from its pristine perch.

Critically, Anaximander's own student, Anaximenes, did with his teacher's ideas what Anaximander had done with Thales'—he took on board only those ideas that survived critical analysis and tried to replace those that did not. Thus was born a tradition of criticism, in which teachers expected not conformity but *disobedience* by their students. Students, meanwhile, received the knowledge of their teachers with the expectation that they could *improve* upon it. Even though ideas could, in principle, change from generation to generation, the tradition itself was self-sustaining because it consisted of norms such as tolerance of dissent, critical discussion, tried-and-true educational

practices, and protocols for how to integrate new ideas into the culture. That is, a tradition of criticism consists not only of explicit criticism but also institutional and inexplicit knowledge of how to maintain and propagate itself in the face of its core teachings changing unpredictably from generation to generation. And while criticism is obviously a defining characteristic of a tradition of criticism, the institutional knowledge required to sustain it is not some trivial detail to be taken for granted. For a tradition of criticism is potentially the beginning of an infinite stream of knowledge growth, whereby ideas are endlessly improved by iterative cycles of exposing errors in established ideas via criticism, and then conjecturing new ideas that lack said errors and hence survive said criticisms.

Because a tradition of criticism may grow our knowledge without end, the state of our knowledge at the dawn of such a tradition is not so important. This is why Thales' creation of a tradition of criticism is more fundamental than his particular hypotheses about cosmology or even his rejection of the supernatural, valuable though that was. For no matter what ideas in physics and philosophy Thales had offered, *any* tradition of criticism could, with enough time, resolve all of his errors and rediscover whatever genuine knowledge he might have created. For example, even if he had never questioned the sensibility of supernatural explanations, some future student of his school may well have. In other words, because there is a truth of the matter, all traditions of criticism should converge in time, regardless of their starting point.

Only 150 years separated Thales' death from Socrates' execution-by-poison in 399 B.C. Plato's writings indicate that Socrates was familiar with Thales, and, given Socrates' own predilection for starting critical discussions with his fellow Athenians, it seems implausible that Socrates would not have appreciated the tradition of criticism that Thales had begun. Yet Socrates was put to death for impiety (read: dissenting from the city's religious norms) and corrupting the youth (read: teaching students to question authority, tradition, and dogma). Apparently, what Thales had begun in the sixth century did not spread to Athens' political institutions by the time Socrates had tried to encourage disobedience—or, if it had, Athens' cultural forces had snuffed it out.

We should not be surprised that a tradition of criticism takes work not just to maintain, but to spread into new spheres of human activity. Recall that the first human societies were dominated by traditions of obedience, not criticism. Traditions of criticism are therefore never 'givens' but must be created, sustained, and spread via human creativity.

Even in the West, not all institutions have integrated a tradition of criticism. While we have morally evolved since the time of Socrates and so do not execute dissenters, we *do* impose harsh penalties on those who criticize, disobey, and exhibit novelty in some areas of life. It is precisely those areas that have yet to bring Thales' innovation into the fold.

One may retort that the West has become so infused with traditions of criticism across the most important sectors—such as science, politics, and the market—that any lingering static outposts are hardly worth our concern. But, first of all, the growth of knowledge is unpredictable, so we cannot know which ideas will affect which areas of society. A lack of a tradition of criticism with respect to raising children, for instance, could easily have robbed us of thousands of teenage scientific geniuses. Secondly, the presence of a tradition of obedience poses a threat to the traditions of criticism that exist alongside it. Just as there are no guarantees that a tradition of criticism propagates itself into the indefinite future, so too there are no guarantees that it will not be swallowed whole by its static counterparts at any moment. Even if a tradition of obedience seems not to pose a threat *in the moment*, it could always, in principle, 'go feral'.

Traditions of criticism are the most fundamental institutions on which progress depends. Without them, every other institution that *can* facilitate progress will not do so. The modern West is dominated by the descendants of Thales; let us not leave any room for the descendants of Socrates' executioners.

