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Plato's Absolutes vs. Thomas Kuhn's Turbulent World of Paradigmatic Shifts

Knowledge, by its very nature, is an evasive and abstract concept. What does knowledge entail? How does one attain knowledge? And, furthermore, can one be sure of the validity of knowledge? These and other questions constitute the core of man's intellectual development and, thus, have dominated the works of scholars and thinkers throughout history. In particular, Thomas Kuhn in The Structure of Scientific Revolutions discusses knowledge as it relates to science and how, through close analysis, science can serve as a model for other disciplines. Paramount to his theory is the notion of the world-view or paradigm. He analyzes the nature of paradigms, how they are established, and what induces a paradigmatic shift. Not surprisingly, Plato, perhaps the greatest philosopher of all time, also offers his thoughts on knowledge: they come in the form of reconstructed dialogues between his teacher, Socrates, and some of Socrates' contemporaries. The Trial and Death of Socrates explores the search for absolute knowledge and the path one must take to acquire it. The two works present very different opinions on the nature of knowledge and these divergent theories translate into opposing world views. The world envisioned by Thomas Kuhn in The Structure of Scientific Revolutions, a world characterized by everchanging sets of knowledge, challenges the notion of absolute truth and contests the existence of a society founded upon such truth as prescribed by Socrates in Plato's The Trial and Death of Socrates.

Before an analysis of knowledge according to Kuhn can begin, it is essential to define knowledge in his terms.

Observation and experience can and must drastically restrict the range of admissible scientific belief, else there would be no science. But they cannot alone determine a particular body of such belief. An apparently arbitrary element, compounded of personal and historical accident, is always a formative ingredient of the beliefs espoused by a given scientific community at a given time (Kuhn, 4).

Kuhn identifies knowledge as a 'belief' and describes the 'arbitrary' nature of what constitutes scientific knowledge. Even in his very basic definition, Kuhn points to the fact that knowledge is not only comprised of empirical fact, but also a personal element that allows it to take on different significance for different

individuals. Kuhn has, therefore, already begun to refute the concept of absolutes. The *paradigm*, which lies at the heart of his message, is an omnipresent world outlook that dominates every facet of life for those who subscribe to its tenets. It influences the way one views the world and, thus, takes on an even greater importance during crisis situations. In *The Structure of Scientific Revolutions*, he illustrates the many varieties of paradigms. He points to historical examples, among them Copernicus' refutation of the work of Ptolemy and how, through the practice of normal science, paradigms can be adjusted and modified.

Discovery commences with the awareness of anomaly, i.e., with the discovery that nature has somehow violated the paradigm-induced expectations that govern normal science. . . Assimilating a new sort of fact demands a more than additive adjustment of theory, and until that adjustment is completed—until the scientist has learned to see nature in a different way—the new fact is not quite a scientific fact at all (Kuhn, 52-3).

The 'anomaly' that Kuhn is describing is anything that does not follow the theory, anything that produces a contradictory result within the operation of normal, experimental science. Yet again, Kuhn identifies the normative aspect of paradigm shifts. Only after the scientist 'has learned to see nature in a different way' will scientific fact actually be considered seriously. The subjective nature of this process coincides with Kuhn's view of knowledge as ever-changing. And after all of the elaboration and complicated arguments, Kuhn's philosophy boils down to one simple concept; the relative nature of truth and knowledge. He expounds on how man is tireless in his pursuit of the absolute truth, yet, as demonstrated throughout history, this entity has so far eluded him. Now that knowledge has been described and the form that it takes, the paradigm, has been identified, Kuhn addresses certain historical examples to show the nebulous concept of absolutes as they are applied to science. Again referring to the world view that dominated Europe for about 1300 years, Kuhn illustrates how, in one fell *swoop*, the entire body of knowledge that mankind had come to trust was revolutionarily dismissed (Kuhn, 68-9). With his discoveries and theory of *heliocentrism*, Copernicus changed the world in a way that is still being felt to this day. "In other cases, however—those of Copernicus, Einstein, and contemporary nuclear theory, for example—considerable time elapses between the first consciousness of breakdown and the emergence of a new paradigm (Kuhn,86).

Kuhn argues that even after a theory has broken down, it takes 'considerable time' for a new set of beliefs to be accepted into the heart and mind of society. Thus, knowledge is at least somewhat relative in this respect—as indicated by the fact that not everyone initially accepts it. Furthermore, Kuhn, building on his notion of relative truth, elaborates on recent scientific development and how this development may dictate the future course of world events. He points to Einstein and others to make the point that modern history is a period of transition and that paradigmatic shifts are the primary cause of this turbulence. What then is the nature of man and his pursuit of knowledge? According to Kuhn there will continue to be intellectual and cultural strife in the world as long as man is unsatisfied with what he knows and anomalies continue to disprove what he believes. Consequently, the nature of scientific revolutions, or, more specifically, the rise and fall of popular paradigms, can be seen as a belief system very comparable to religion. In our modern era, science is often immune from the criticism that plagues religion and philosophy. Yet, Kuhn would argue that this is inappropriate. Science is the pursuit of knowledge, and until that knowledge is absolute and infallible, belief will continue to play a major role.

What one must understand, however, is the manner in which a particular set of shared values interacts with the particular experiences shared by a community of specialists to ensure that most members of the group will ultimately find one set of arguments rather than another decisive (Kuhn, postscript 200).

When 'values' begin to interact with 'experiences', one starts to find normative rather than objective views being presented. Inherent in any scientific theory, and, consequently, any paradigm, are the opinions and personal beliefs of those who proposed the theory. So where does this leave the world today? Kuhn asserts that we are left with a dynamic world where the truth depends on one's point of view; resulting in a truth that is as fickle as the masses who embrace it.

In contrast, Plato in The Trial and Death of Socrates, delivers a strong message in support of the existence of absolute truth in the world, and the noble endeavor of searching for this truth. The book, which describes the trial and subsequent philosophical conversations between Socrates and his friends, identifies several areas where absolute truth exists and explains how one should go about attaining this

truth. How can knowledge be defined in Socratic terms? Knowledge and truth are absolute - and they exist only where pure reason and rationality reside.

Just as if I were really a stranger, you would certainly excuse me if I spoke in that dialect and manner in which I had been brought up, so too my present request seems a just one, for you to pay no attention to my manner of speech - be it better or worse - but to concentrate your attention on whether what I say is just or not, for the excellence of a judge lies in this, as that of the speaker lies in telling the truth (Plato, 22).

Socrates calls for the jury to cut through the tangled web of rhetoric and demeanor and examine the core, the absolute truth of his message. Even during a trial clearly stacked against him, Socrates maintains his faith in the citizens of Athens and their ability to use reason to find justice. Absolute truth is attainable by the common man, and his institutions are a manifestation of this fact. Furthermore, knowledge is not boastful, and it is not arrogant. The truly wise man therefore "leads a private life" so as to fend off the corrupting influences of money, power, and prestige impediments to the realization of truth (Plato, 34). These opinions allow Socrates to identify a few areas where absolute truth can exist. The purity of man's institutions, or at least the duty of one to respect these institutions, is a subject that pervades Socrates' thoughts after the trial. He is encouraged by his friends to run away from Athens and live in exile in another land. Yet Socrates responds to this suggestion with a vitriolic sermon on the nature of absolute law. How can he as a subject of Athens, who has for his whole life enjoyed her security and indulged in the liberty of her streets, deny the authority of her laws by running from them?

To do so is right, and one must not give way or retreat or leave one's post, but both in war and in courts and everywhere else, one must obey the commands of one's city and country, or persuade it as to the nature of justice. It is impious to bring violence to bear against your mother or father, it is much more so to use it against your country (Plato, 51).

In the face of injustice, Socrates professes a rigid faith in truth—a truth that transcends the impetuous nature of man. This truth is absolute and goes a long way in characterizing his world-view. Despite his outspoken respect for the law of Athens however, Socrates does not shy away from criticizing the principles upon which she was founded. He attacks the ideals of democracy for, to Socrates, they are

contradictory to the pursuit of absolute truth. The man who lives a public life cannot be devoutly searching for true knowledge because he makes himself available to be corrupted by the aforementioned forces.

Consequently, Socrates envisions a society, fixed on the common goal of absolute truth. In this respect, his society's most attractive attribute, aside from being an atmosphere that fosters the growth of logical and rational thought, is the degree of stability it provides. Essentially, this society is governed by a pervasive ideology that defines every facet of life in that society. The ideal is absolute truth.

No man would insist that these things are as I have described them, but I think it fitting for a man to risk the belief - for the risk is a noble one - that this, or something like this, is true about our souls and their dwelling places . . . if during life he has ignored the pleasures of the body and its ornamentation as of no concern to him and doing him more harm than good, but has seriously concerned himself with the pleasure of learning, and adorned his soul not with alien but with its own ornaments, namely moderation, righteousness, courage, freedom, and **truth**, and in that state awaits his journey to the underworld (Plato, 55).

Plato argues through these powerful episodes that truth is a precious commodity, yet its pursuit is a risky endeavor. It is much easier to subscribe to intellectual, ethical, and moral relativism for they are not as demanding. Yet the only way man may reach his full potential, and have the peace of mind that comes from self-realization, is to tirelessly cling to the truth and its virtues. Plato is, in essence, advocating an early form of Stoicism—a philosophy that would not take root until some time later under the influence of the Roman philosopher Seneca. It is an existence based on the absolute virtues of truth and self-denial that results in a stable atmosphere for personal and societal development. The Socratic society, its primary objective a realization of absolute knowledge, operates under this paradigm. However, it is a far cry from the dynamic world of changing beliefs envisioned by Thomas Kuhn.

The overriding similarity between the philosophies of Kuhn and Plato, albeit somewhat limited and perhaps even coincidental, is worthy of explanation. Both prescribe a society responsive toward knowledge in all its forms. They operate under a certain paradigmatic formula and each society sees this formula as universally applicable throughout its culture. On the one hand is the world of Kuhn where absolutes are evasive and what was perceived as truth is consistently being discredited. By contrast, the world

envisioned by Socrates is a world centered around the acquisition of absolute knowledge. Despite the glaring differences between the two philosophies, differences which will be discussed in detail shortly, a common approach to knowledge and truth unites the two texts. Knowledge, whether it be absolute or relative, is derived from a logical, rational perspective. The Socratic method and the steps Kuhn proposes for problemsolving are very similar in this respect. However, they come into direct conflict at many issues resulting in two, entirely divergent prescriptions for the structure of society.

There are giant contradictions that arise between the stability of absolutes in the Socratic arena and the dynamic, revolutionary nature of Kuhn's world. For the sake of conciseness, it is pertinent to look at only a few areas where these paradigms face off. Politics/law, the pursuit of knowledge, and the resulting prescriptions for society serve to accentuate the dramatic ideological schism between The Trial and Death of Socrates and The Structure of Scientific Revolutions.

As mentioned before, Socrates puts his faith in the infallibility and authority of Athenian law. There is an important distinction that must be made before one elaborates on this particular position. It is not that Socrates agreed wholeheartedly with everything dictated by Athenian law, or even that he agreed with the principles of democracy upon which Athens was founded, because he did not. What he did believe was that Athenian law commanded his allegiance and that the relativistic mechanisms of survival were not absolute and, therefore, were actually detrimental to a society (Plato, 51-2). If one engaged in the struggle for mere survival, this struggle began to dictate truth to that individual and, more importantly, the individual began to see truth as relative to his situation. In a political and legal sense, Socratic absolutism called for allegiance and loyalty on the part of all citizens in response to the social contract made between them and their government; "You must either persuade it or obey its orders, and endure in silence whatever it instructs you to endure, whether blows or bonds, and if it leads you into war to be wounded or killed, you must obey" (Plato, 51). Plato argues that truth lies not in the institution as it exists, but in the system as it was intended.

Kuhn takes a much more pessimistic approach to politics, law, and how they can be applied in the search for knowledge. He argues that since man's search for absolute truth will never be satiated, how then can his institutions provide ideological support when they themselves are constantly undergoing change. Just as science conducts experimentation within an accepted paradigm, so too does government operate under an all-encompassing set of ideals. However, when these institutions fail to adequately address the concerns of a few individuals, when an anomaly occurs if you will, the validity of the entire system comes into question.

Political revolutions are inaugurated by a growing sense, often restricted to a segment of the political community, that existing institutions have ceased adequately to meet the problems posed by an environment that they have in part created. In much the same way, scientific revolutions are inaugurated by a growing sense, again often restricted to a narrow subdivision of the scientific community, that an existing paradigm has ceased to function (Kuhn, 92).

For Kuhn, the truths that shape political and governmental institutions are not absolute. Rather, they are subject to the same revolutionary forces that disrupt science on an everyday basis. The discontent of a select few can bring about a full-scale paradigmatic shift. For Kuhn, the steps of 'persuasion' advocated by Socrates are marginal in that they are not meant to alter the system as it exists, but instead serve as anomalies that lead to new theories being proposed and the factionalization of the entire system. The most significant argument Kuhn makes against the absoluteness of law is the theory that at some point, no matter how well-structured an institution appears to be, it will inevitably crack under the pressure of competing paradigms. "At that point the society is divided into competing camps or parties, one seeking to defend the old institutional constellation, the others seeking to institute some new one. And once that polarization has occurred, *political recourse fails*" (Kuhn, 93). This position cannot be reconciled with Plato's in that one puts faith in the absolute truth that pervades man's institutions while the other, Kuhn's, points to the turbulent world of shifting political systems and values.

The culmination of this analysis is a prescription for society—the way the two men see it. Kuhn, who envisions a world of intellectual fickleness and uncertainty, directly contests the notions of absolute

truth proposed by Plato. On a small scale, comparisons abound between Kuhn's world and Plato's world. Their aforementioned stance on politics and government is just one example. Yet these are the tangible, realworld battlegrounds where these theories face off. On a larger scale, the struggle can be viewed as the individual struggle for absolute truth versus a collective relativism or pluralism if you will. The scientists, bureaucrats, engineers, or whomever that operate under the paradigmatic philosophy of Kuhn invest their time and energy in experimentation within the paradigm. When a crisis arises, that is, when a sufficient number of anomalies have arisen to question the foundation of a belief system, a group of individuals, perhaps not as large as the original but still a cohesive group, will work together to discover a new version of the truth—a new way of explaining knowledge. This type of collectivism would not hold with the Platonic philosophy regarding truth. To Plato and Socrates, truth is an individual pursuit that one must partake in and, though knowledge may increase, and intellectual maturation may occur, the truth in its absolute form will never change. It's hard to say which theory is right, perhaps it's a question that shouldn't even be asked. I believe history is full of instances where both of these philosophies would have proven useful, just as it is full of these types of intellectual disagreements. Yet the ultimate goal of mankind is to determine how and when to use each argument for societal betterment. Not an easy task when one has such vastly divergent theories on the structure of society.