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Ways of Knowing

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Kuhn: The Second Half

Descartes’ writing leaves me with a sense that I am inadequately equipped to be a researcher. His empiricist approach to research is so far from how I approach research that I find it necessary to dissect his text in order to come up with a formula for evaluating a theory using judgment/experience. In contrast, Kuhn’s view of comparing a theory to the paradigm and proving it using established rules is more comfortable and makes more sense to me. I can do puzzles!

However, though I prefer Kuhn’s research approach (logical positivism), his perspective in the second half does not totally appeal to me. For example, his incommensurability theory is difficult to accept in totality.  Kuhn puts forth three areas in which theories have no common measure: (1) methodological; (2) perceptual/observational; and (3) semantic. Methodological methods, I disagree with Kuhn, can be compared and measured across fields. Science can be an exact science. Perception/observation, on the other hand, I agree with Kuhn, this is subjective and difficult to measure. Kuhn likened perception/observation to the Gestalt-switch that occurs when one sees the duck-rabbit diagram first as (representing) a duck then as (representing) a rabbit (Kuhn 1996, 122). Often, the perception about what we see must be helped by the guidance of one who sees it differently and can guide us by sharing direction/rules to view it as they do. Of course, one must be open to new ways of knowing. I also disagree with Kuhn that Semantics is an incommensurable. Textbooks (a good thing, according to Kuhn), for instance, are used effectively to establish a common meaning within a community and across fields. Meaning, I agree, can impede the communication but it should not (for open-minded researchers) be an insurmountable obstacle.

Specifically, I found Kuhn’s idea that history could not be used to refine a paradigm or to help propel a paradigm shift unconvincing. I believe that every discovery is made on the shoulders of those that preceded and who investigated similar work. Kuhn gives many examples of who did what first but then disparages the importance of the contributions of earlier investigators. Kuhn minimizes the impact that anomalies, reported intentionally or by chance, and the questions left unanswered by early researchers had on current/future research is perplexing.

In addition, recognizing that history is linear and taking events of the past into account, semantics is made ‘not’ immeasurable. The acceptance of a standard language inside a scientific community is made more global by understanding history. Like the federalist papers, the bill of rights and the amendments, science lingo too, changes through the ages to adapt to the increase in knowledge and advances in technology. Meanings shift to current practices and knowledge. Through the acceptance that science is linear, researchers can use earlier research to find proof for a ‘new’ paradigm. Anomalies observed in an earlier era can be used to prove consistency and drive investigations that may lead to a paradigm shift…yesterdays’ by-chance anomalies can turn out to be tomorrows paradigm if new knowledge or current technology can be applied to prove a theory. It is difficult to accept Kuhn’s idea that Einstein's theory of relativity did not supersede Newton's theory but only improved it, when taking into consideration the importance of accumulated knowledge over time. This is a case of articulation necessitating history to make sense of events.

History serves to guide society and with it the science that society uses to improve upon knowledge. It is difficult to comprehend how Kuhn came to the conclusion that history could not be used to prove a theory. Numerous must be the research undertakings that have begun because something in the writing of earlier researchers did not make sense (anomaly)? …A seasoned researcher, for instance, may detect something amiss in the method or conclusion of an early research work and thus begins to examine the anomaly that may result in a new theory born from old data. I believe Kuhn’s difficulty in grasping that history can aid research stems from his inability to see things from an empiricist point of view. *(WOW! Did I just say that?).*

Kuhn may have identified this deficiency in himself when he wrote that °“paradigms structure the way scientists see and interpret reality, and thus preclude other ways of seeing and looking at reality until they are overthrown and replaced by another paradigm”. Maybe his critics are right, Kuhn gives the impression that he is a ‘strong kind of constructivist’. Regardless of this shortcoming, Kuhn’s approach resonates with me. However, I hope to grow up to become a researchers with little bit of every approach…empiricism, constructionism, realism, etc.,

°Johnson, V. C. (2011, october 11). The neglected dimension of competitiveness [Web log message]. Retrieved from http://chronicle.com/blogs/worldwise/the-neglected-dimension-of-competitiveness/28752