

Debate: How a scientist sees

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Side A: Scientists see the world better than you.

In the movie, 'Ghostbusters', there is a scene where in response to a question from the library administrator Dr. Peter Venkman says 'Back off man, I'm a scientist' (Ghostbusters). The library administrator was unfairly questioning Venkman's scientific methodology. Since Venkman is a scientist he has expertise in the field, and should be allowed to question as he chooses since his knowledge of the supernatural is far greater than the library administrator's. Furthermore, this is validated by the premise that the library administrator has called upon Venkman and his team to solve this paranormal investigation that he could not have.

Pinch's theory-ladenness of observations, in his paper 'Towards an analysis of scientific observation', suggests that externalities exist in Venkman's line of questioning that make it difficult to be understood by the untrained. Pinch writes "the more external the [questioning], the more assumptions about the observational situation that must be included" (Pinch, 13). To the observer scientific methodology is a black box until it is unraveled and understood. In this particular circumstance the explanation behind Venkman's questions remains a blackbox for the library administrator, and could imply the library administrator's view of the world being more limited than Venkman's.

Kuhn's views on perception, in his book 'Structure of scientific revolutions', would add to Pinch's theory and suggest that understanding of something strongly depends on previous knowledge. Kuhn writes "what a man sees depends both upon what he looks at and also upon what his previous visual-conceptual experience has taught him to see" (Kuhn, 113). In this case, Venkman has previously encountered similar scenarios while the library administrator has not, so his perception of the world is different to the library

administrator's.

In addition, Kuhn's theory on paradigms and the Duck-Rabbit example suggests that the scientist and the library administrator could be seeing the world completely differently.

Two paradigms cannot communicate.

Scientists unravel blackboxes that most people abstract away in order to understand the world better.

Side B: Scientists do not see the world better than you.

Kuhn's theory of paradigms suggests that the paradigm supported by the scientist and the paradigm supported by the library administrator are incommensurable, which means that we can not compare them.

Works Cited

Reitman, Ivan, dir. *Ghostbusters*. Columbia Pictures, 1984. Film. Pinch, Trevor. "Towards an analysis of scientific observation." *Towards an analysis of scientific observation*. 1985. Print.

Shapere, Dudley. "Concept of Observation in Science and Philosophy." *Concept of Observation in Science and Philosophy*. 1982. Print.

Kuhn, Thomas S. "Structure of scientific revolutions." *Structure of scientific revolutions*. 1962. Print.

Cartwright, Lisa. "Screening the body." *Screening the body*. 1995. Print.

Daston, Lorraine and Galison, Peter. "Objectivity." *Objectivity*. 2007. Print.