

Theory of Knowledge Essay

“A skeptic is one who is willing to question any knowledge claim, asking for clarity in definition, consistency in logic and adequacy of evidence” evaluate this approach in two areas of knowledge.

We often learn to be critical thinkers and to be skeptical about the information we receive. In physics, we have specific criteria about this, dictated mainly by the scientific method, which asks us to be skeptical. In literature, however, there seems to be no “correct” answer. But if everyone is correct, is anyone then correct at all? Although from the outset physics and literature may seem very different, they might have more similarities than one would expect.

Language can express ideas and thoughts, however it also reflects a writer’s cultural and societal background. Science, on the other hand, ideally does not have these layers, referring literally and specifically to objects, methods and findings. Essentially, a scale is a scale and does not carry any symbolic meaning. Without this level of clarity, scientists around the world might interpret a scientific report differently, carry out experiments and do calculations differently, and science would not apply universally or even globally, hence undermining the very purpose of science.

Conversely, in literature, it may be argued that clarity arises from ambiguity and cultural bias. Although it seems contradictory, it is exemplified throughout literature. For example, in his novel *A Clockwork Orange*, Anthony Burgess creates his own language comprising words from the Russian language and English slang mixed with

regular English. On the one hand, this gimmick obscures the literal meaning, yet on the other hand this is part of the point Burgess is trying to make. The language becomes an obstacle and distances the reader from the extreme violence Burgess is writing about and therefore the reader understands the violence inherent in society. This of course begs the question: do they? If yes, this must mean that literature is written in two separate languages. We could divide these into the literal and the figurative, and the reader must understand both to understand a piece of literature. It would therefore be pointless in this case to ask for clarity of language purely in the sense of understanding the words and sentences themselves. But how do we justify literature or scientific ideas?

In physics, reason plays a big role in justifying hypotheses. The use of reason and logic has to be consistent so that it can be applied universally and by all scientists. However logic may give rise to a subtle ambiguity. In science it is common to look for absolute and universal truths, and the only thing necessary to disprove a theory is one instance of it not being true. If an object is observed not to adhere to a theory just once, the theory is disproved. That is the essence of the natural sciences and the heart of the scientific method. In reality, however, it is not so simple; the birth of quantum mechanics and relativity in the beginning of the 20th century gave rise to a number of problems concerning classical physics, such as Newtonian mechanics that had been accepted for centuries. Objects on an atomic scale or travelling at extremely high speeds do not behave like Newtonian mechanics tell us they should. Although a whole body of new equations and theories have accounted for some of these differences, can physics really tell us anything about the world if there is nothing universal, or should we accept that we need a different set of theories for some things? It seems that within

physics, the reasoning with which conclusions are reached is very mathematical, and is consistent, however it may not be reasonable in physics to expect that one theory will be able to explain everything.

Looking at the role of reasoning in literature, if we say that literature is and should be ambiguous and open to interpretation, how do we know what it is telling us? It would be too easy to say that literature can be interpreted in whatever way one wants, and everyone is equally right about their own subjective opinion. If that were the case, would literature be saying anything at all?

Similar to physics, literature follows certain rules, however in contrast to physics, they can and maybe occasionally should be broken. Authors use various literary devices such as allegory, metaphor and personification, which are deliberate inaccuracies and logical fallacies. The logic within the devices may be inconsistent, but does that necessarily mean that the logic of literature is? Looking for example at George Orwell's *Animal Farm*, as a reader with some historical and literary knowledge, the logic may seem quite clear. The story is an allegory that is really commenting on societal and power issues and the animals are historical figures. Without this knowledge, it may however seem ludicrous that animals should behave in that way, because animals can't talk or do any of the things Orwell says they can. Therefore, the logic is not consistent with the scientific, proven logic of reality, but rather consistent with a set of rules pertaining specifically to literature that dictate how we may interpret nonsense to have a deeper meaning.

In a sense, literature and physics may both present some amount of truth, one being figurative and the other literal, however even the figurative truth refers to literal

truths, even if we have to apply a different kind of logic in different areas of knowledge to make sense of it.

The last issue is thus: what exactly are we making sense of, and on what evidence are we basing our conclusions?

Physics emphasizes the process of conducting an experiment. The scientific method dictates that a hypothesis shall be tested thoroughly until there is enough evidence and that all experimental error should be taken into account. This raises some issues.

Firstly, when is there enough evidence? Secondly, how far can we trust the data and how do we determine its adequacy? “Enough evidence” can vary between different experiments. For example, in 1971, Hafele and Keating conducted a famous experiment whereby they flew around the world, once Westward and once Eastward, with atomic clocks on board. This was done to test Einstein’s theory of special relativity, which states that time would pass by more slowly on the plane than on Earth. Because the difference would be in the magnitude of nanoseconds, incredibly precise clocks had to be used. The experiment was observed to support Einstein’s theory within experimental error, even though the experiment was only done once. In itself, the Hafele-Keating experiment may not be enough to prove the theory of relativity, however in conjunction with other experiments that point to the same result, it does carry weight. However, even an experiment that is carried out many times can lead to a wrong conclusion. For example, one can drop a piece of paper a million times and see it fall slowly to the ground, yet theoretically it drops with the same speed as a rock. How would we find out? One way is by means of thought experiments, as Galileo did, yet are these completely reliable? Maybe adequacy of evidence is not determined only by the sheer amount of repetitions, but by a factor

such as how thoroughly all factors have been taken into account. But what determines this and how are we ever sure we have found the “right” answer?

In literature, it is important to define what is meant by adequacy of evidence. Is it the evidence one finds before drawing a conclusion about the author’s message, or does the author have to provide evidence? Because of the nature of literature, the former is probably the most important, because art expresses thought and what is important is what an audience believes a piece of literature means. So, for example, I could argue that *The Great Gatsby* is a novel about the unattainability of the American dream, because, firstly, it is about a man who dies trying to attain the American dream and secondly because the woman he loves, and who embodies this dream, refuses to be with him in the end. Does the fact that other conclusions can be drawn from similar evidence make the evidence less adequate? I could also, for example, have said that the story is about how human beings are corrupt, and this might equally hold true. In physics, the point is that evidence should lead to one unanimous conclusion, however there is no such conclusion to be found in literature. Furthermore there are no anomalies, as the author “constructs” the evidence and this evidence supports different points made about a piece of literature. It is therefore up to the individual to choose amongst the evidence whether or not this is adequate enough for them to believe in. With this amount of subjectivity it might not be possible to say that there is a specific rule for an adequate amount of evidence and it may not have to be agreed upon by everyone for something to be “right,” as opposed to physics. Even though diverging opinions do occur in both, it is more prevalent and more accepted in literature, and it may even be integral to literature as a subject due to its dealing with human beings.

Despite their differences, skepticism is important in both physics and literature. Even if there is more than one “right” answer or an experiment seems to have been proven, there are still reasons to doubt conclusions drawn. We may never know for certain whether we have a “right” answer, but without questioning the language, reasoning and evidence we may easily accept things that are entirely false. Both in literature and physics, this approach can validate claims and give meaning to them.

Bibliography

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Fitzgerald, F. Scott. *The Great Gatsby*. NuVision Publications, LLC, 2008. Print.

Orwell, George. *Animal Farm*. London; [Kbh.]: Penguin ; [distribution: Front Row], 1999. Print.

For more information on the Hafele-Keating experiment, see the link:

<http://hyperphysics.phy-astr.gsu.edu/hbase/relativ/airtim.html>