Evidence, Knowledge, and Gas Gauges

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Are beliefs knowledge? This is the fundamental question Williamson raises in his assertion that evidence is knowledge, or, \( E = K \). This removes the two components of the traditional analysis of knowledge: justification and belief. A primary difference between belief and knowledge is that “knowledge entails truth while belief does not. There is false belief but no false knowledge” (Knowledge First 208). For Williamson, evidence equaling knowledge is similar to the scientific principles—either there is evidence of something or there is no evidence of something. If there is no evidence, then there is no knowledge. Williamson develops this into his “knowledge first” approach: evidence is what you know. Therefore, knowledge must exist first. Beliefs are then derived from this knowledge, rather than belief contributing to knowledge. A famous objection is presented by Hawthorne and his look at a gas gauge.

**Hawthorne’s Objection to \( E = K \)**

1. I see a gas gauge that reads 'Full.' The gauge is accurate, and so I come to know that the gas tank is full.
2. I see a gas gauge that reads 'Full'. The gauge is inaccurate, and so (since knowledge is factive) I do not come to know that the gas tank is full (Hawthorne 454).

Hawthorne’s objection is simple: if \( E=K \), the gas gauge is providing different evidence despite measuring the same tank of gas. The person reading gas gauge (1) is dealing with a different world then the person reading gas gauge (2). There is an asymmetry of evidence: the gas gauges are reading something different while the gas tanks are both full. We must conclude that gas gauge (1) is providing evidence while gas gauge (2) is not providing evidence.

**Williamson’s Reply to Hawthorne**

Case 1: The world that the observer in world (1) knows, may actually be in world (2). Although the “gauge is accurate, that fact is not epistemologically available in the way required for seeing that it reads ‘Full’ to yield knowledge that the tank is full” (Williamson 478). With this view, neither observer in either world knows the tank is full. Because of this, \( E=K \) still stands.

Case 2: It is not the case that the observer in world (1) knows he is in world (2). In world (1), the danger of an inaccurate fuel gauge is too remote for world (2) to be an epistemic possibility. The observer in world (1)
is in better circumstances for epistemic possibility. Therefore, the observer in world (1) has better evidence than the observer in world (2). This proves an asymmetry of evidence and asymmetry of knowledge. Evidence and knowledge remain symmetrical to one another. There is not knowledge without evidence nor evidence without knowledge. Therefore, $E=K$ is still accurate.

**An Analysis of the Objection and Reply**

Hawthorne’s reply has a litany of issues. The first of which is that it the gas gauge is simply a device that may or may not indicate the correct amount of fuel. A gas gauge can work without issue for 10 years. However, let’s say the driver of the car hit a pothole with enough force that it caused the gas gauge the flail wildly, and giving out a different random measurement of gas every time the driver looks at it. Does this change the amount of fuel in the tank? It does not. What if we reverse the components of Hawthorne’s argument? The driver checks the fuel tank daily to see if it is indeed full. The gas gauge reflects this. It is full for 364 days. On the 365th day, the tank is empty but the gas gauge still shows that it is full. Does this change the evidence? It does not, we have evidence that the gas gauge has issues and not the gas tank. Hawthorne’s argument seems to be based on the probability of the gas gauge being accurate, rather than genuine evidence of the gas tank not being full. Hawthorne’s objection relies on gathering minimal evidence which allows Williamson to effectively reply and disarm the objection. If knowledge is based on evidence, then we cannot restrict ourselves to evidence based on probability, the evidence must be shown to be evidence or non-evidence.

Williamson’s reply also has issues because it too relies on probability. The focus on epistemic possibility is simply a spiced-up version of probability: that knowledge received from evidence may be true. This seems to go against Williamson’s earlier argument where he claims that evidence should be looked at in a scientific manner. In science, evidence either exists or it does not exist. Fresh water boils at 100 degrees Celsius. This can be tested and falsified through a minor modification such as changing the altitude or composition of the water. When this is tested we will have a different batch of evidence to account for the
change in the circumstances. Williamson’s reply does not make room for this because it relies on the probability of something being true rather than it being definitely true or non-true.

**Evidence-First Contextualism**

We can know if the gas gauge is accurate or inaccurate in our car without being subjected to cruel Hawthornean restriction on obtaining evidence: we are free to use other means or simply experience to determine if it is true or not. We are even free to debate on what “full” means. Is it full when the gas gauge need is perfectly aligned with the “F”? Is the gas tank full when you overfill the tank, with any excess gas draining?

Perhaps the greatest argument for evidence-first contextualism is that you test the boundaries of evidence daily. Regardless of justified true belief or any of its 4th condition modifiers, you prove to yourself that you have knowledge of various types in different settings based on evidence. You have evidence that olive oil is great for cooking with at low cooking temperatures as much as you know that it burns when your pan is too hot. You do not need to create a system for knowledge—it naturally occurs through these daily encounters with evidence.

Evidence-first contextualism makes room for a universe of complex possibilities. By its nature it is malleable, it is not a school of thought with hard-defined versions of knowledge, belief, truth, and so on. It is like a sandbox: in this particular set of circumstances, the evidence creates a field of knowledge. In a differing set of circumstances, the evidence will lead to a different form of knowledge. We know that in space, there is vacuum with no oxygen, no sound, and now air resistance. Things that occur in space are completely silent. However, when we enter the sandbox of *Star Wars*, loud sounds, fiery explosions, and aerial maneuvers are possible in the *Star Wars* universe. Knowledge within evidence-contextualism functions in the same way. We have evidence that the space in *Star Wars* is quite different from the space in photographs from the Hubble telescope. Our possible knowledge is limited only by the available evidence.

1. Evidence is the basis for knowledge
2. You define the context, or sandbox, where your evidence is true
3. Your evidence establishes knowledge in that context
An evidence-first contextualism avoids the problems of skepticism by creating a system of knowledge based on evidence. This evidence is not permanent or universal, but specific to its circumstances. This allows us to avoid Williamson’s knowledge-first epistemology to justify belief as well as Hawthorne’s prohibition on evidence gathering. As Leonard Shelby states in *Memento*: “Memories can be distorted. They’re just an interpretation, they’re not a record, and they’re irrelevant if you have the facts.” The concept of knowledge is as hazy as memories, and evidence within a specific context is our best attempt at creating knowledge.
Works Cited

