

Knowledge and Reality A: Lecture Nine

1. Empiricism and the *a priori*

Many people subscribe to *empiricism*: that all knowledge is grounded in, and justified by, experience. But *a priori* knowledge seems to threaten this. Here we have knowledge that apparently *by definition* need not be acquired through empirical methods. It's easy to see why Empiricists were concerned. What faculties did we have for getting knowledge without empirical means? Was it *innate* knowledge? Born within us?

2. Empiricist Reply I: Analytic versus Synthetic Truths

Analytic statements are those statements which, if one knew the meaning of the words/concepts used, would clearly be true.

Examples: All bachelors are unmarried men; All triangles have three sides; All animals are animals.

Synthetic statements are ones which aren't analytic. So they are statements that need more than merely meanings to be seen to be true.

Examples: All bachelors are predisposed to play Xbox; Triangles are of interest to various British people (namely, certain mathematicians); All animals are larger than 16 nanometres.

We might think all *a priori* knowledge is *analytic* knowledge. In this way, *a priori* knowledge wasn't really about the world, but just about our concepts, and so it's fine for the empiricist to think you know *those* things *a priori*.

Example: My pouce thumb; All bachelors are unmarried men; All triangles have three sides.

Those examples look unproblematic. But there are examples of synthetic *a priori* statements.

Example: Colour exclusion. If an object is blue all over it cannot be yellow all over. Is that not an *a priori* truth? If it were *analytic* then the *meaning* of ' is blue all over' would include that it *isn't* wholly yellow. But that is implausible. We could teach someone the meaning of being blue all over *without ever mentioning yellow*. This is quite unlike ' is a bachelor'. We can only teach someone what a bachelor is if they already grasp what an unmarried man is.

We find more examples of these synthetic *a priori* in mathematics. A simple example is: $7+5=12$. If you know the meaning of '7', '5' and the addition function you don't necessarily know that $7+5=12$. It's not captured by the *meanings* alone. Don't believe me? What about the more complex mathematical truths? You understand the meaning of ' is a prime number' but that alone *doesn't* capture that there are an infinite number of them. You understand the meaning of '1,254,647,241', '35,421' and what it is for one thing to be a square root of another, but that doesn't entail you know that one *is* the square root of the other. Even more complexly we have things like Fermat's Last Theorem (and other, as yet unproven, theorems in mathematics). They're *a priori* but just knowing the meaning of constituent components *doesn't* tell you whether these things are true or false.

3. Empiricist Reply II: There is no *a priori* knowledge

Examples: All bachelors are unmarried men; $2+2=4$.

These, said Mill, *are* induced from empirical evidence. You see that bachelors are unmarried men only by going out in the world and *discovering* that bachelors are unmarried men. You see that everytime you have two things, and two more things, you have four things. The only difference between this and the putative cases of *a posteriori* knowledge is the ease and breadth of cases. You might be tricked into thinking them *a priori* only by this overwhelming amount of evidence that the propositions are true.

4. Empiricist Reply II (more): Quine takes what Mill says, and runs with it

Quine wanted to 'naturalise epistemology'. Bring it more in line with science. Indeed, he wanted to naturalise all of philosophy. Thus far, the philosophy you've studied seemingly doesn't involve empirical evidence. Some take this to mean that philosophy deals with *a priori* facts; figuring out from our armchairs what the world is like. Quine didn't like this idea.

Instead, he thought that the subject matter of science and philosophy was one and the same. What was different was the degree to which the beliefs philosophy dealt with were entrenched in our belief network. Philosophical beliefs were deeply entrenched, forming the justification for numerous other beliefs. Thus,

thought Quine, people often mistook them to be of a different *kind* of belief (philosophical as opposed to empirical). But it was just the degree of entrenchment that they differed.

5. Quine and Duhem

This talk about beliefs supporting other beliefs to certain degrees, with no belief being sacrosanct, should all remind you of something: namely, coherentism. Quine was indeed a coherentist. The reason for this stems from the work of Duhem. Duhem argued that, in science, you can only test a full belief system, not a single belief. Think back to Popper on falsification. So in science you come up with a hypothesis, that you then test. If the test goes one way, you give up on the hypothesis, and if it goes the other, you don't give up on the hypothesis.

Hypothesis: The world is flat.

If the world is flat, then the ship will get smaller and smaller and smaller. But that, of course, isn't what happens. If the world is round, the mast will slip below the horizon, as if the ship is sinking. This is why we have, for a very long time, all known the earth was round.

But Duhem says it doesn't work like this. Instead, you aren't testing a single belief *in isolation* of other beliefs. You're testing lots of beliefs together. So, for instance, we assumed that light was going in a straight line. If light instead curved down, that'd explain it as well.

Every piece of empirical evidence *could* be taken to damn *not* the hypothesis that the Earth is flat, but (i) that light goes straight *or* (ii) that there isn't some mysterious mist at sea that refracts light oddly *or* (iii) that God doesn't play with your noodle to make you think the Earth is round

Some beliefs will be easier to deny than others. Other parts could be given up, but it'd be harder to do so. Or you could alter other beliefs, with radical consequences to your belief structure. That kind of thinking is coherentist: that beliefs end up in a web with one another, and we cannot treat the *justification* of beliefs in isolation from one another. What Quine does is the same thing for the *a priori*.

6. Quine on the *a priori*

Example: The Blond Bachelor Community.

When the blond married man arrives, there are two choices: (i) revise the belief about bachelors being blond; (ii) revise the belief about bachelors being unmarried. After all this new bachelor might be like the other bachelors in all other ways (blond, flirts a lot, spends disproportionate amounts of time playing Xbox 360).

(From Everitt and Fisher) If a woman gives birth to a child, she is the child's mother. Known *a priori*? What about IVF? Two choices: (i) the donor is the mother; (ii) the woman who gives birth is the mother.

Certain logical and mathematical statements might even stand in need of revision.

Examples: Every statement is true or false (law of excluded middle); No statement is true and false (law of non-contradiction); $1/3=0.33333\dots$

Now, this isn't to say you *should* revise these beliefs. Only that you *might* have cause to. As with the Duhem example, there are cases where the revision brings about such a huge change in your belief structure that it's not worth revising.

Example: The world being flat versus light bending upwards.

The same applies here. We have our belief structure. When we are asked to revise beliefs that are meant to be *a priori* we might find that to do so causes insufferable damage to our structure. Better to keep the belief.

That's what Quine thinks: the putative examples of *a priori* knowledge are only thought to be *a priori* (conceptually incoherent to deny) because they're so entrenched. One mistakenly believes they're *impossible* to give up. But they're not *impossible* to give up on! Although it would require radical revisions in your belief structure. So we can see how coherentists can gel their theory with empiricism. To solve the 'problem' of *a priori* knowledge they abolish such a notion.