

Also by Stephen Law
The Philosophy Files

The Philosophy Gym

25 SHORT ADVENTURES IN THINKING

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WHAT IS KNOWLEDGE?

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We all want knowledge. We want to know when the bus is coming, what's for tea and how the economy will do next year. We respect those who have knowledge, seeking them out for advice. And yet, despite the enormous value we place on knowledge, we quickly come unstuck when we ask ourselves what it actually is. The question 'What is knowledge?' is the sort of question that we think we can answer easily – until we try. This chapter explores two competing answers.

Plato's Answer

Let's begin with Plato's (c. 428–347 BC) answer.

The scene: Pegeen and Pat are philosophy students who have decided to visit a racecourse. Pat knows absolutely nothing about horse-racing, but she decides to bet anyway. She picks her horse by sticking a pin into the list of runners. Pat guesses that the horse with the name she stuck the pin into will win. Now, by sheer chance, Pat happens to get lucky. Her horse does go on to win.

Pat: Aha! You see. I knew Black Beauty would win.
Pegeen: You did not.
Pat: But I said Black Beauty would win, didn't I? And she did. So I knew.

Did Pat *know*? Of course not. Pat simply guessed and got lucky. And a lucky guess is not knowledge. But if a lucky guess isn't knowledge, then *what else is required*?

Pegeen: You did not know that Black Beauty would win. OK, I admit that your belief was true. But that's not enough. After all, you know nothing about horse-racing, do you? It was just a *coincidence* that your belief turned out to be true.

Pat: So what else is required?
Pegeen: *Justification*. In order to *know* something, your belief must be true. But that's not enough. You must also have *pretty good grounds* for believing what you do.

In Pegeen's definition of knowledge, three things are required. For Pat to know that Black Beauty will win:

1. Pat must *believe* that Black Beauty will win.
2. Pat's belief must be *true*.
3. Pat must be *justified* in holding that belief.

In other words, knowledge is *justified true belief*. This definition of knowledge has a long pedigree running right back to Plato.

Why didn't Pat know that Black Beauty would win? The first two conditions were satisfied, but not the third. Pat wasn't *justified* in believing Black Beauty would win. That, according to Pegeen, is why Pat didn't know.

How Much Justification?

Let's get a little clearer about what Pegeen's third condition involves. What does 'justified' mean?

In fact, justification comes in degrees. You can be more or less justified in believing something. For example, if I see Jake, a formerly poor student, wearing an extremely expensive suit, then I have some grounds for believing that he has come into a lot of money (not strong grounds, though: perhaps the suit was merely a gift). If I also see him driving a new car, then my belief becomes better justified. If he tells me he has just bought a helicopter and a ten-bedroom house in Mayfair, then I am more justified still.

So what degree of justification is required for knowledge? How much evidence do I need before I can be said to *know* that Jake has come into a great deal of money? According to Pegeen, I must have *pretty good grounds* for believing what I do.

Admittedly, 'pretty good grounds' is rather vague. Exactly how much justification does one need before one possesses 'pretty good grounds'? Still, let's just set that worry to one side.

Of course, it's possible to be justified and still be mistaken. For example, if Jake goes on to give me a helicopter ride and a guided tour of a Mayfair mansion, and if he tells me he's won the lottery, then surely I have pretty good grounds for supposing he has really come into money. But I might still be wrong. Maybe Jake is lying. Maybe he's just been looking after all this stuff for his rich sister. Unlikely, perhaps, but possible.

The Regress Problem

The definition of knowledge offered by Pegeen and Plato might seem to be 'common sense'. In order to know something, you surely need some grounds – at least pretty good grounds – for supposing that your belief is true. But, as Pat now points out, this definition of knowledge immediately raises a thorny problem: *it seems to rule out the possibility of us having any knowledge at all.*

Pat: Not all knowledge requires justification, surely?

Pegeen: Why not?

Pat: Well, I currently have a belief: I believe that George Bush is in New York. Call this belief *belief A*. If my belief is to count as knowledge, then according to you my belief must be *justified*, right?

Pegeen: Yes.

Pat: Now, usually we justify one belief by appealing to *another*, don't we? For example, I might try to justify my belief that George Bush is in New York by appealing to my belief that it was reported on the TV news that he's in New York and the TV news is pretty reliable. Call this second belief of mine *belief B*. Now I'm only justified in appealing to *belief B* to justify *belief A* if *B* is *itself* justified, correct?



Pegeen: I guess so.

Pat: For example, I might justify my belief that the TV news is pretty reliable by appealing to my belief that, on a number of occasions when something was reported on TV, I knew that what was reported

was actually correct. Call this third belief *belief C*. But if *B* is to be justified, then *belief C* must *in turn* be justified, right?



Pegeen: Yes.

Pat: But now you can see that *the chain of justifications is going to have to stretch back without end*. In order to have even *one* justified belief, I'll need an *infinite number* of justified beliefs!

Pegeen: Ah. I hadn't thought of that.

Pat: As I'm a finite being capable of having only a finite number of beliefs, it then follows that *none* of my beliefs can be justified, right?

Pegeen: I guess.

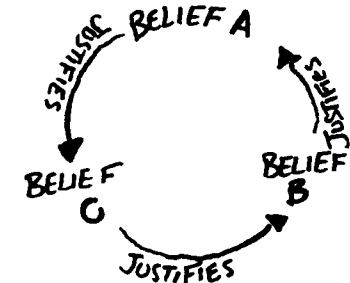
Pat: But then it follows that, in your definition of knowledge, *I don't know anything at all!*

Pat has raised a notorious difficulty with the suggestion that knowledge is justified true belief. It seems to force what's known as a *sceptical conclusion on us* – it seems to rule out the possibility of our having *any* knowledge.

Still, Pegeen is not yet convinced that there really is a problem.

Pegeen: What if the justification goes in a circle? What if we take the end of the chain of justifications and attach it to the beginning to make a loop?

Pat: That won't do. Suppose my sole justification for believing that there are fairies living at the bottom of the garden is my belief that there are fairy droppings down there. And suppose my sole justification for believing that there are fairy droppings at the bottom of the garden is my belief that there are fairies living down there. Then *neither* of these two beliefs is justified, surely? Such a circular justification is *no*

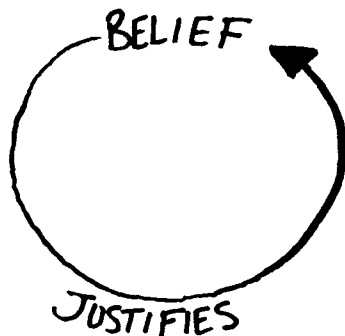


justification at all, no matter how many or how few beliefs the circle happens to contain.

While Pat has raised a serious problem for the theory that knowledge is justified true belief, there may yet be a way of avoiding it.

Pegeen: H'm. OK, I agree that a circular justification is unacceptable. But what if certain beliefs are *self-justifying*? Suppose that the chain reaches back to a belief that *justifies itself*. Then there's no regress.

Pat: I can't make much sense of the claim that there are self-justifying beliefs. If a belief is used to justify itself, then the justification is *still* circular, isn't it? True, the circle has shrunk to include just the one belief. But that doesn't make the circularity any more acceptable.



Certainly, if *any* form of circular justification is unacceptable no matter what size the circle, then self-justification is unacceptable, too.

Thinking Tools: Self-Justifying Beliefs

What sort of belief might be self-justifying? Perhaps my belief that I exist. For, by believing that I exist, I demonstrate that I do. So my belief provides me with grounds for supposing that it is true.

Some philosophers have suggested that our beliefs about how things seem to us are also self-justifying. I can be mistaken in thinking that there's a tomato before me – I might be hallucinating. But I can't be mistaken in supposing that this is how things *seem* to me. So, arguably, my belief that this is how things seem is self-justifying (or is it merely a belief that requires no justification?).

Pat: It's pretty clear that if we're to avoid the sceptical conclusion that knowledge is impossible, not all our beliefs need be justified. *There must be at least some beliefs that qualify as knowledge despite not being justified*. So your justified true belief theory must be false.

This is a serious problem for the theory that knowledge is justified true belief: it rules out the possibility of our having any knowledge at all. I call this *the regress problem*.

Thinking Tools: Gettier's Objection to Plato's Theory

There's a second reason why one might want to reject the theory that knowledge is justified true belief. In 1963 the philosopher Edmund Gettier (b. 1927) published a three-page paper in which he showed that justified true belief is not enough for knowledge.* Gettier constructed some ingenious counterexamples in which, while a subject possesses a justified true belief, the subject clearly doesn't *know*.

Here's a Gettier-style counterexample:

The case of the purple Porsche. Suppose I see a purple Porsche parked in the college car park. That leads me to believe that Jennings, who I know drives a purple Porsche – a very unusual car – and who is rarely in college, is in college today. My belief that Jennings is in college is justified. However, it just so happens that the purple Porsche is not Jennings' – by sheer fluke, someone else parked one there today. But, coincidentally, Jennings is in college: his purple Porsche broke down and he caught the train. Do I know that Jennings is in college today?

In this case, I possess a true belief that is also justified. So, on Pegeen's and Plato's definition of knowledge, I know that Jennings is in college today. But it doesn't seem right to say that I know. Why not? Because my justification for believing that Jennings is in college has somehow become detached from the state of affairs that makes my belief true. The presence of a purple Porsche in the car park *actually has nothing to do with Jennings' presence in college*, despite the fact that it does justify my belief

* E. L. Gettier, 'Is Justified True Belief Knowledge?', *Analysis* (1963).

that he's in college. There is a sense in which, again, I merely *get lucky*: it's just a coincidence that my belief happens to be true. Here's another Gettier-style counterexample:

The case of the fixed race. Suppose I'm told by someone who is usually an extremely reliable source of information that the next race has been fixed and Black Beauty will win – all the jockeys have been bribed. This leads me to believe that Black Beauty will win the race. Given what I've been told, I'm justified in believing that Black Beauty will win. But now suppose that, unbeknown to me, something goes wrong with the plan to bribe the jockeys and the horses run as usual. However, it just so happens that Black Beauty does win. Did I know Black Beauty would win?

Again, despite having a true belief that is also justified, it seems I don't know.

So to sum up: you can have a true belief, and also very good grounds for holding it, and yet *still* not know.

Causing Jim to Believe There's an Orange on the Table

We have seen that Plato's definition of knowledge results in the regress problem: it seems to entail that we can't have any knowledge at all. But surely we can and do have knowledge. So it seems that Plato's definition can't be correct. But if knowledge isn't justified true belief, then what is it?

One of the most interesting alternatives to Plato's definition of knowledge is the *causal theory of knowledge*. It's the causal theory that Pat now explains to Pegeen.

Pegeen: If knowledge isn't justified true belief, then what is it?

Pat: It seems to me that in order to *know* something, three things are required. You must believe. Your belief must be true. And your belief must be *caused* by the state of affairs that makes it true.

Pat has, in effect, replaced Pegeen's third condition concerning justification with a condition concerning causation. How might this third condition be satisfied?

Imagine you want to cause Jim to believe that there's an orange on the table in front of him. One very easy way to do this is to place an orange on the table. Assuming that Jim's eyes are open and the lights are on, the presence of the orange will cause Jim to believe that there's an orange before him. Light will bounce off the orange into Jim's eyes. This will cause an image to form on his retinas, which will in turn cause electrical impulses to be sent into his brain, which will in turn cause Jim to believe there's an orange there.

If all goes to plan and the orange really does cause Jim to believe there's an orange before him, does Jim *know* that there's an orange before him?

Yes, according to the causal theory, he does. Jim's belief that there's an orange before him is caused by the orange being there. His belief is caused by the state of affairs that makes it true.

In order to *know* that there's an orange before him, does Jim have to have any *justification* for believing there's an orange before him? No. On the causal theory, justification is unnecessary.

Are People like Thermometers?

Let's get a little clearer about how, on the causal theory, we come by knowledge of the world around us.

Jim's belief that there's an orange before him is caused via a particular perceptual mechanism: his eyes. But it's not only our eyes that make our beliefs causally sensitive to the world around us. We have not one sense but five: sight, hearing, touch, smell and taste. All five senses are pretty reliable mechanisms for producing true beliefs. (Sometimes they lead us astray, of course, but not very often.)

According to the causal theory, it's because our senses are reliable mechanisms for producing true beliefs that they are capable of furnishing us with knowledge. Our senses make us function in much the same way as do thermometers. A thermometer is a reliable indicator of temperature. Put it in a hot liquid, and the scale will indicate that the liquid is hot. Take it out and put it in a cold liquid, and the scale will indicate that the liquid is cold. The scale on the thermometer reliably reflects the temperatures of those liquids in which it's immersed.

My senses cause me to behave much like a reliable thermometer. Drive a car past my window, and my ears will cause me to believe that a car is being driven past my window. Stop the cars going by, and I will cease to believe cars are going by. Place

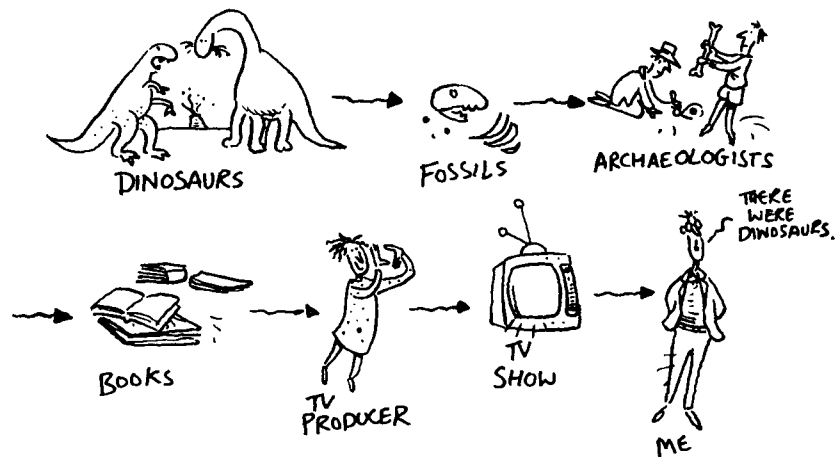
a chocolate biscuit on my tongue and that will cause me to believe that I'm chewing on a chocolate biscuit. Take it away and I will believe the biscuit has gone.

On the causal theory, people know about the world around them precisely because they are causally hooked up to it via their senses in such a way that their beliefs are sensitive to how things stand out there in the world.

Knowledge of Dinosaurs

How, according to the causal theory, are we able to have knowledge, not just of what's immediately before us, but of what, say, happened in the distant past? Take, for example, my belief that dinosaurs roamed the earth millions of years ago. Why, according to the causal theory, does this belief qualify as a piece of knowledge? After all, I can't observe the past, can I?

The causal theorist will point out that there is still a causal link: my belief that dinosaurs roamed the earth millions of years ago is caused by the presence of dinosaurs walking the earth millions of years ago. But in this case the causal link is very indirect. The dinosaurs became fossils. Those fossils were then discovered by archaeologists, who wrote about their discoveries in journals and books. These journals and books were read by TV producers, who then made TV programmes that were then transmitted to my TV set and watched by me, resulting, finally, in my belief that dinosaurs once roamed the earth. So, while I believe that dinosaurs roamed the earth *because they did*, the causal chain linking my belief back to the state of affairs that makes it true is very long indeed. This is, of course, something the causal theory can allow.



Solution to the Regress Problem

We have seen that, on the causal theory, in order for Jim's belief that there's an orange on the table in front of him to count as knowledge, all that's required is that his belief be caused by the state of affairs that makes it true. He doesn't need any justification for believing what he does. We have now dropped the requirement that, for knowledge, a belief must be justified. But this means that we avoid the justificatory regress problem that plagued Plato's definition of knowledge.

Thinking Tools: Dealing with the Purple Porsche Case

Notice that the causal theory also provides a very neat explanation of why I don't know in the two Gettier-style examples discussed in the box above. Take the purple Porsche case, for example. It's clear that, though I am justified in believing that Jennings is in college, and though my belief is true, I don't know he is in college. The reason I don't know, according to the causal theory, is that my belief is not caused by the state of affairs that makes it true: I don't believe Jennings is in college because he is. After all, I would still believe Jennings was in college even if he hadn't bothered to come in, because I would still have seen that purple Porsche. Gettier puzzle solved!

The Psychic Sarah Case

We've seen that, unlike Plato's justified true belief theory, the causal theory avoids the justificatory regress problem. So is the causal theory the theory we should adopt?

No. Unfortunately, there are also problems with the causal theory. Pegeen remains convinced that justification must have some role to play when it comes to defining knowledge. She illustrates why with the following thought experiment.

Pegeen: You're mistaken when you say that all that's required for knowledge is that a person's belief be caused by the state of affairs that makes it true.

Pat: Why?

Pegeen: It's clear that someone could have such a belief and yet still not know.

- Pat:* Give me an example.
- Pegeen:* Very well. Let's imagine that someone, call her 'Sarah', is psychic. She really does have psychic powers. There is, let's imagine, some as-yet-to-be-discovered 'psychic' mechanism for producing true beliefs: a 'sixth sense', if you like. And Sarah, by chance, happens to have been born with this sixth sense.
- Pat:* I see.
- Pegeen:* I'm not supposing the mechanism is supernatural: it could be a perfectly natural, causal mechanism, like sight or hearing. It's just a mechanism we don't yet know anything about.
- Pat:* OK. So Sarah has psychic powers.
- Pegeen:* Now Sarah believes that her mother is in town today. And the reason she believes this is that her psychic powers are working: her mother really is in town today. Her mother usually lives hundreds of miles away. But today she decided to pay her daughter a surprise visit. Now, on your causal theory, Sarah *knows* her mother is in town today, right?
- Pat:* Yes. If her belief is caused, via this psychic mechanism, by the state of affairs that makes it true, then she knows.
- Pegeen:* Right. Except she *doesn't* know. For Sarah has absolutely no reason to think she is psychic. Indeed, she possesses very good evidence that there are no such things as psychic powers. And Sarah has no reason to believe that her mother is in town. Her mother usually lives hundreds of miles away.
- Pat:* Why is any of this relevant? Sarah still *knows* her mother is in town. She *is* psychic, whether or not she knows she is!
- Pegeen:* She *doesn't* know her mother is coming. From Sarah's point of view, her belief *is utterly silly and irrational*. She has no reason to believe that her mother is in town. She doesn't even believe she's psychic. She just finds herself stuck with this belief that she can't shake: that her mother is in town. Given that this belief is, from her point of view, *barking mad*, how can we say she knows?
- Pat:* But she does know!
- Pegeen:* No, she doesn't!

* This example is adapted from a famous one presented by Laurence Bonjour. See his 'Externalist Theories of Empirical Knowledge', *Midwest Studies in Philosophy*, Vol. 5 (1980).

Does Sarah know? The causal theory says she does: Sarah's psychic mechanism has produced a true belief: she is functioning in a thermometer-like way.

Yet most of us feel, at the very least, uncomfortable with the suggestion that a belief that is, from the believer's point of view, totally irrational might nevertheless count as knowledge.

Of course, we could easily fix the problem raised by the psychic Sarah case by adding on to the causal theory the requirement that the belief must also be justified. That would rule out Sarah as a knower, for, of course, Sarah is not justified in believing what she does.

But the requirement that to qualify as knowledge a belief must be justified led us into another difficulty: the justificatory regress problem. The requirement seems to rule out the possibility of our having any knowledge at all.

So we're faced with a puzzle. On the one hand, we need to avoid the justificatory regress problem. But it seems we can do so only by dropping the requirement that, to qualify as knowledge, a belief must be justified. But if we drop that requirement, then we run into the problem raised by the psychic Sarah case: that a wholly irrational belief might then count as knowledge.

In other words, we find ourselves being pulled in two different directions at once. On the one hand, it seems that justification *must* be required for knowledge. On the other hand, it seems it *cannot* be.

How do we solve this puzzle? You may have ideas of your own.

What to read next

In this chapter we have, in effect, been trying to pin down what philosophers call the *necessary and sufficient conditions* for knowledge. For both an explanation of 'necessary and sufficient conditions' and another example of how philosophers try to provide them, see Chapter 9, But Is It Art?.

Further reading

Chris Horner and Emrys Westacott, *Thinking through Philosophy* (Cambridge: Cambridge University Press, 2000), Chapter 2.