

1. Knowledge versus Understanding

A number of philosophers have recently argued that we need to distinguish between knowledge and understanding. Understanding, they argue, is a distinct epistemic and cognitive state.

How do they differ? Hills argues that, unlike knowing why p, understanding why p involves a range of abilities. When q is why p, understanding why p requires the abilities to:

- (i) follow an explanation of why p given by someone else;
- (ii) explain why p in your own words;
- (iii) draw the conclusion that p (or that probably p) from the information that q;
- (iv) draw the conclusion that p'(or that probably p') from the information that q' (where p' and q' are similar to but not identical to p and q);
- (v) given the information that p, give the right explanation, q;
- (vi) given the information that p', give the right explanation, q'.

Hills argues that these abilities are both necessary and quite likely sufficient for having moral understanding:

These abilities are, I think, individually necessary for moral understanding, and I suspect that they may be jointly sufficient, provided that it is true that p and that q is why p (though I am open to the possibility that other abilities may be required in addition).

Hills argues that one of the chief virtues of this account is that it captures that understanding comes in degrees: I can understand better why the substance exploded than you.

The Argument from Degrees:

Premise 1: Understanding comes in degrees.

Premise 2: Knowledge does not come in degrees.

So, knowledge and understanding are not the same mental states.

2. Is Knowledge Necessary for Understanding?

2.1 Epistemic Luck

Journals: Jane is a surgeon who picks up a scientific journal from a stack and reads an article about a novel therapy against hepatitis B. She learns that the medication is highly effective – much more so than the established therapies – and that this is so because it targets a particular protein of the virus. As it turns out, this journal was the only accurate one in the stack. Had Jane picked up any of the others, she would have come to believe that this therapy was no better than the established alternatives.

Hills argues:

Premise 1: Because of epistemic luck, Jane does not know why the novel therapy is highly effective.

Premise 2: But, intuitively, Jane understands why the novel therapy is highly effective.

Therefore, knowing is not necessary for understanding.

3. Is Knowledge Sufficient for Understanding?

Testimony

Faulty Wiring: Suppose that I understand why my house burned down, know why it burned down, and also know that it burned down because of faulty wiring. Imagine further that my young son asks me why his house burned down and I tell him. He has no conception of how faulty wiring might cause a fire, so we could hardly imagine that merely knowing this much suffices to afford him understanding of why his house burned down. Nevertheless, he surely does

know that his house burned down because of faulty wiring, and thus also knows why his house burned down.

These [testimonial] cases show that the sort of grasping needed for understanding requires a more intimate acquaintance with the structure of the explanation than sometimes accompanies mere knowledge. It is not enough to know that one or more parts of, or conditions for, a correct explanation hold; their holding must be directly mentally apprehended. (Strevens, forthcoming)

If you are attempting to gain knowledge, testimony can serve as the justification for your own belief but it is not usually a good way of acquiring moral understanding. Understanding why p will not – cannot – have the same relationship with testimony as knowing why p. (Hills)

Premise 1: In cases like *Faulty Wiring* parent and child both know that the house burned down because of faulty wiring.

Premise 2: If parent and child both know that the house burned down because of faulty wiring, they have the same propositional knowledge about why the house burned down.

Premise 3: If they have the same propositional knowledge about why the house burned down, then both know why the house burned down.

Premise 4: Nevertheless, there is an epistemic asymmetry between two agents: the parent understands why the house burned down and the child does not.

C1: This epistemic asymmetry cannot be explained in terms of the parent's and the child's knowledge. (2,3,4)

C2: And so, knowing why p cannot suffice for understanding why p.

4. Reductionism

The reductionist about understanding argues that understanding is constituted by knowledge. Thus, all there is to understand why p is to have the requisite knowledge why p.

Responding to Epistemic Luck

The following are infelicitous:

- Jane understands why the hepatitis medication is effective but she does not know why it's effective.
- Jane understands that the new medication is effective because it targets a particular protein of the virus but she does not know that it's effective because it targets a particular protein of the virus.
- Jane understands what the most effective therapy against hepatitis B is but she does not know what the most effective therapy against hepatitis B is.
- Jane understands how to treat hepatitis B but she does not know how to treat hepatitis B.

The defect here is semantic: the reason why these sentences sound infelicitous is that they are contradictory; understanding *entails* knowing. The linguistic data favors reductionism.

Can the non-reductionist argue that linguistic date is unreliable because cases like *Journal* rare and unusual?

They are *not* unusual; Jane is lucky to have acquired non-misleading evidence about the effectiveness of the new treatment. We are often lucky to have non-misleading evidence. Such luck seems compatible with knowledge. So, we should reject Premise 1 of the non-reductionist's argument.

Responding to Testimony

Parent and child both know that the house burned down because of faulty wiring. They both divide a range of alternative possibilities as to what could have caused the fire; the testimony of the

firefighter allows both of them to locate the actual world on the right side of the divide. Nevertheless, they differ in what they know: the parent knows *more* about what caused the house fire than the child. This knowledge is propositional in nature: it's a matter of a *difference in content*. In some contexts, to say that an agent knows why p can be ambiguous between:

- The agent knows that some sentence 'p because of q' is true.
- The agent knows why p – for example, she knows that p because of q.

We should reject the non-reductionist's Premise (2).

Parsimony

It does not postulate a novel cognitive attitude to a proposition ("grasping"), nor does it require us to introduce a novel epistemic attitude with an altogether different kind of object (a modal relationship, for instance).

Degrees of understanding

Agents differ in what they understand in virtue of differing in *what* they know. Knowledge comes in different amounts. Better understanding is simply a matter of more knowledge. Understanding comes in different degrees because what is known comes in different amounts.

According to reductionism, if testimony is a source of knowledge, then it is also a source of understanding. But there are limits to the degree of understanding that may be transmitted in a single testimonial exchange; it's not just a function of what the speaker communicates; it's just as much a function of what the hearer already knows. Two agents receiving the exact same testimony about why p may nevertheless differ greatly in their degree of understanding of why p.

Readings

- Hills, Alison (2015). Understanding Why. *Noûs* 49 (2):661-688.
Strevens, Michael (2013). No understanding without explanation. *Studies in History and Philosophy of Science Part A* 44 (3):510-515.
Zagzebski, Linda (2001). Recovering Understanding. In M. Steup (ed.), *Knowledge, Truth, and Duty: Essays on Epistemic Justification, Responsibility, and Virtue*. Oxford University Press