

*"Achilles: Well this isn't just a book—it's a book plus a whole process. How does a book plus a process feel?"*

*Tortoise: How should I know? But you can ask it that question yourself."*

—Hofstadter, *A Conversation With Einstein's Brain*

## "A Conversation with Einstein's Brain"

Recall: functionalism is the view that minds are functionally specified entities, and mental states are their functional states.

A functionally specified entity can usually preserve its functional status across certain changes:

- changes in its physical constitution, and
- changes which complicate the way it achieves its functional purpose.  
(consider my "elaborate mouse trap")

Because of this it seems like not only humans, martians, and octopuses will have minds but also:

- human-like entities made of "machine" parts, and
- elaborate contraptions or schemes that exhibit human-like functioning (perfectly).

**Einstein's Brain.** Someone makes a book with a page for each neuron in Einstein's brain which contains all the relevant functional information about the operation of that neuron. This allows someone "operating" the book to replicate what would have happened in Einstein's brain had he lived. We add rules governing how sounds would affect his brain had Einstein heard them, and a way to read off signals that would have come from Einstein's brain to his vocal cords had he tried to speak. In this way, we have all we need to carry out a "conversation" which would be *exactly like one you could have had with Einstein had he lived.*

Compare:

*simulating* minds— creating something which *acts* like something that can think and feel.

*creating* minds— creating something which genuinely thinks and feels.

Many feel that the book, or its "operation", would only *simulate* a mind. If so, functionalism in the form I stated would be false.

What do you think?

Are you skeptical that the book is minded? You might wish to consider...

*Slow Replacement Thought Experiments:* If you think something like an X can't be a mind, imagine that your brain is very gradually transformed into an X.

E.g. Neurons in your brain are gradually replaced with transistors, or complex microscopic mechanical devices made of cog wheels, or even the parts of a book, which functionally mimic the behavior of the neurons. We do this a slight bit at a time. How would this affect your mental states? Would you lose consciousness at any point? Gradually, or all at once? Would you "know" that you were losing consciousness?

Or are you, by contrast, feeling sympathies with those who say the book is minded? If so, it's worth remembering that scenarios like that in "Einstein's Brain" present some very tough questions for the functionalist, all raised in the dialog you read.

- (1) Is there mentality when the book isn't 'operated'?
- (2) Does the speed of operation make a difference?
- (3) What happens when the operator "takes a break". Does this kill the thinker? Does whether the thinker is alive depend on whether the operator intends to come back?
- (4) Does the book have to be "all together"? Can it be spread out across different towns? Different countries? If so, "where" is the intelligence located?

Problems raised by these questions have persuaded many that not just *any* change that preserves functional status will also preserve the existence of mentality. They advocate the...

**"Too many minds" objection:** Functionalism counts outlandish, clunky, manifestly inanimate entities of thought experiments as having minds. So functionalism can't be right.

Some possible reactions:

- (A) Concede this as the end of Physicalism, go back to improve the dualist position.
- (B) Give up Functionalism as the complete theory of the mind, but continue to explore other physicalist positions. For example: you could maintain that function matters, but so does constitution to a limited extent. (But when, and why?)
- (C) Go in for die hard functionalism. Reply by simply accepting that things like a book could be conscious. (Perhaps adding that we only presume they cannot be because of pride or bias.)

As I'm sure you can see, none of these choices is easy for those who were hoping that a simple, intuitive physicalist position would emerge.