



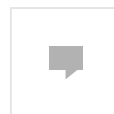
SCIENCE BEHIND THE FICTION: HOW BODY SWAPPING COULD REALLY WORK, LIKE ALTERED CARBON IRL

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In Netflix's **Altered Carbon**, humanity can transfer consciousness from one body to another by way of an implant called a "Stack" inserted into their spinal cord.

Inspired by Richard K. Morgan's novel of the same name, the show takes place in a cyberpunk future where bodies are merely vessels for digitized human consciousness. It's not a new idea. Numerous books and movies have toyed with the idea, but there are those who believe the human brain is too complex to be recreated digitally.

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SYFY WIRE reached out to experts in neuroscience to separate the fact from fiction.

First off, let's talk about what consciousness is. Generally speaking, consciousness is "any kind of subjective experience whatsoever," explained Anil Seth, professor of cognitive and computational neuroscience at the University of Sussex.

Consciousness lives in a series of brain cells, called neurons, which, when activated, produce memories. Some scientists believe if these neurons were mapped they could be recorded and **transferred to another body**.

While this is not theoretically impossible, said Seth, the way it happens may be different from what people expect.

Credit: Netflix

In most science fiction, consciousness is "extracted" from the brain and "injected" into a computer. Seth said it seems unlikely this will ever happen.

"It's been a very powerful metaphor for a long time that we've thought of the brain as a kind of computer and the mind as the software that runs on that computer," Seth said.

"The brain isn't a computer. It doesn't work anything like a normal computer does. There are some similarities, I suppose, but it's not a computer. So there's no obvious sense in which one would upload one's mind or awareness to a machine at all," he added.

But Seth said there may be another way.

It's more likely consciousness will be transferred to another person by replicating human bodies, he said. This still poses some problems.

A person's sense of self is not just a set of memories, but is tied to their physical body. So if human **consciousness could be transferred** then it would "massively" alter their personal identity, Seth said.

"It's not just this 'Stack' thing, it's not just a few lines of code or a few billion lines of code that I can slip in and out of different sleeves or different bodies without anything particular changing," he said, referencing the plot of *Altered Carbon*.

David Carmel, who runs the Brain Stimulation lab at the University of Edinburgh, said it may be possible in the foreseeable future to transplant human brains into another body.

Assuming the procedure would work, would you still be you? Carmel said for all intents and purposes, yes.

"We didn't take our consciousness out of our brain and put it into a different biological brain, it's still the same brain, just in a different body," he said.

Regardless of the method, Carmel said even if it was possible to transfer human consciousness to another body there would be no way to ensure it's been done successfully.

But that won't stop people from trying.

"People have a fascination with the mind and the relationship between the body and the mind," said Carmel. "The idea of transferring human consciousness captures this fascination."

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