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## How our brains trick us

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"Scuba diver as they swim very close to a shark"

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The Washington Post

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Our brains are constantly perceiving the world as more stable than it actually is. Consider this: Every time the light hits your face differently, you look a little different -- but people don't perceive you as having suddenly changed into someone else. In fact, they probably don't see your face as having "changed" at all. Without this neurological trick, the world would be a decidedly more confusing place.

But according to a study published this week in Current Biology, that mechanism -which researchers have dubbed the "continuity field"— can also steer us wrong, and have us convinced that two totally different faces or forms are the same.

"The brain is creating stability out of what's actually a very unstable system," said David Whitney, the senior study author and a University of California at Berkeley professor of psychology. His lab coined the continuity field term in a previous experiment. In that study, they observed the mechanism by which people meld similar looking objects together.

"When you're watching 'Harry Potter,' you don't notice that his plain T-shirt changes to a Henley, for example," first author and doctoral candidate Alina Liberman said. "Your visual system is primed to see things as remaining stable. You have a bias towards ignoring small changes in your environment."

This study found the same bias in faces, which are obviously more complex -- and more important -- than T-shirts.





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BOYS BASKETBALL:... Liberman showed her subjects faces — one every six seconds — that varied in similarity to each other. After a brief shot of the face, they'd be shown a series of faces that got closer and closer to the one they'd just seen. But the subjects favored morphed faces halfway between their two previous target faces over the previously seen face on its own.

In other words, the subjects were primed to believe that the two faces they'd seen at such close intervals had been the same person, and were quick to "recognize" a morphed face that supported that perception. So we don't just ignore Harry Potter's obvious wardrobe goofs -- we ignore the brief appearances of his stunt double, too.

"If you see two faces in the span of about 10 seconds," Liberman said, "You expect them to look the same."

And thank goodness we do. "It's a way of smoothing our perception of people," Whitney said. "Without this mechanism, we'd experience fluctuations in identity." We'd have trouble recognizing someone as a single individual when they moved their face or moved into a different light.

With that "Twilight Zone"-esque alternative on the table, I happily forgive my brain for tripping up on sneaky movie cuts.





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