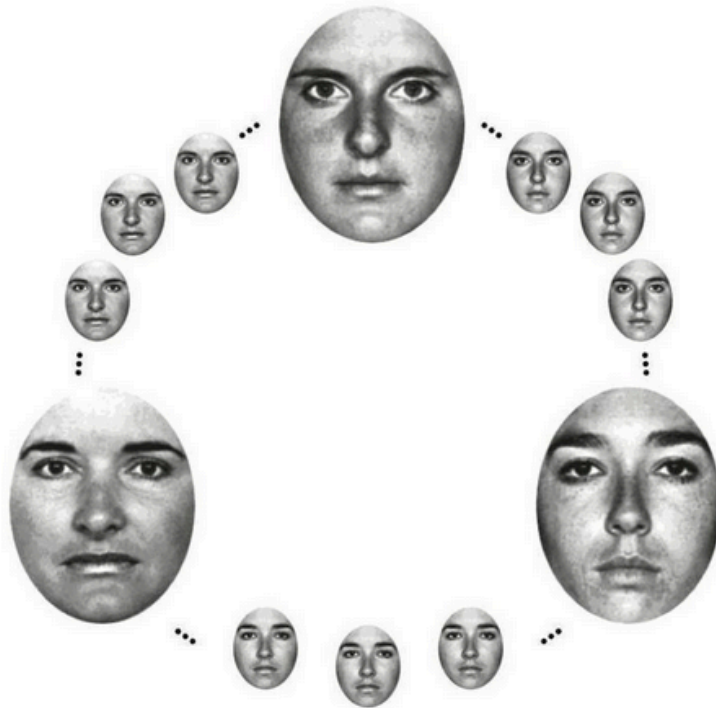


BRAINIAC

Why you can't tell Jennifer Lawrence from her stunt double



ALINA LIBERMAN

A face wheel from a recent face recognition experiment at the University of California, Berkeley.

By Kevin Hartnett | GLOBE CORRESPONDENT OCTOBER 15, 2014

Our sense of sight is famously unreliable. When we're distracted, we miss tricks like a magician's sleight of hand, and often our perception doesn't update quickly enough to process rapid changes in our visual environment, like the flash of a subliminal advertisement.

Neuroscience researchers at the University of California, Berkeley, recently looked at another well-established limitation of the way we see the world: The fact that when watching a movie, we can't distinguish between the name actor and her stunt double, despite the fact that side-by-side, they're plainly distinct. What they discovered is that our brains go out of the way to perceive a face as consistent from one moment to the next, even when it's not.

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“We found that how we see faces can actually be wrong — it can be biased by faces we’ve just recently seen,” wrote lead researcher Alina Liberman in an e-mail.

Liberman, who’s a graduate student, and her collaborators, including Jason Fischer of MIT, ran an experiment published online in Current Biology earlier this month. Study participants were first shown a “target” face. Then they were asked to identify a match for it in a subsequent series of faces, which were slight variations of each other. In most cases, the face chosen as a match was actually a composite of the two faces participants had seen most recently in the series.

“Our brain seems to take advantage of the fact that we don’t expect people to change from one moment to the next,” Liberman wrote. Instead, she said, it makes the world “look stable, constant, and continuous.”

Psychologists have found this preference for visual stability in other experiments, and they refer to the mechanism behind it as a “continuity field.” This aspect of visual cognition makes it easy for Hollywood to put one over on us, but overall, the researchers argue, it’s a good thing that helps us tame what otherwise would be a visually chaotic world.

I asked Liberman how radically different familiar faces would look without continuity fields — would subtle changes in lighting or perspective make our closest friends look like strangers from one moment to the next? She said it’s impossible to say, because researchers have never found a patient with this exact visual deficit. Then she offered the kind of exciting scenario of sitting down to a meal with a friend, absent the ability to smooth the appearance of his face over time:

If we lacked the continuity field for faces, we would perceive fluctuations in identity; we’d have eerie ‘double takes,’ where identities of people might appear to vary under some circumstances. It would be the inverse of the stunt double example. For example, when meeting a friend for lunch, we might see him and think there’s a very similar looking stunt double in his place.

It’s not the kind of experience we’d want to walk around having all the time, but just like the so-called “miracle fruit” that makes everything taste sweet, it could be fun on occasion.

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