Can't tell if it's the Hollywood star or his double? Blame your brain avoiding visual chaos

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A brain mechanism helps humans to identify faces. This mechanism also lets human miss many Hollywood movie mistakes as they happen in a short span of time. (Photo: Allan A/Jfe)

Researchers from the University of California (UC) Berkeley have revealed why our brains cannot tell the difference between a Hollywood star and his double when they switch places in a stunt scene.

The study suggests a new brain mechanism that sticks to a certain face, even if it changes. The brain mechanism is essentially a survival feature for humans as it gives people a sense for continuity, familiarity and stability and avoids visual chaos.

Alina Liberman, a doctoral student in neuroscience at UC Berkeley, who is also the lead author of the study, explains that without this brain mechanism it will become quite confusing for people to identify others. A friend or family member of anyone known will appear as a different person whenever their head turns in shade and light.

The study showed participants a “target” face then asked them to identify a match appearing on a screen. The participants constantly recognized a face, which was not actually the target face but a combination of faces that they had viewed in the last few seconds. Furthermore, the participants recognized a face, which was not very similar to the target face.

Liberman says that the participants found an incorrect match, whether they had gone through many faces before they found a match, or swiftly changed upon what looked like the target face. The participants found a match just within 10 seconds of viewing the target face. The researchers also suggest if a person views two faces within a span of 10 seconds then both of them will seem identical.

“Importantly, if the faces that participants recently saw all looked very distinct, the visual system did not merge these identities together, indicating that this perceptual pull does depend on the similarity of recently seen faces,” says Liberman.

David Whitney, an associate psychology professor at UC Berkeley, who is also a senior author of the study suggests that without the ability to recognize people, many social aspects of life would be lost.

In prior studies, Whitney also recognized the presence of a “continuity field” that makes similar objects if seen in a short span of just 15 seconds. He explains this is the reason why many movie mistakes go unnoticed.

Whitney gives an example of Harry Potter’s t-shirt mistake in the movie “Order of the Phoenix” where Potter’s t-shirt changes from crewneck to Henley shirt and was missed by majority of the audience.

The study has been published in the journal Current Biology.