



## Life & Style

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### Our eyes can see the future



Washington: A new study from Rensselaer Polytechnic Institute suggests that the human visual system is equipped with the ability to foresee the future.

Assistant Professor Mark Changizi says that it takes nearly one-tenth of a second for the brain to perceive what the eyes see.

To compensate for such neural delays, he claims, the visual system has developed the ability to generate perceptions of what will occur one-tenth of a second into the future.

Changizi says that it is due to this quality of the visual system that when an observer actually perceives something, it is the present rather than what happened one-tenth of a second ago.

Building on his "perceiving-the-present" hypothesis, Changizi was able to systematically organize and explain more than 50 types of visual illusions that occur because the brain is trying to perceive the near future.

"Illusions occur when our brains attempt to perceive the future, and those perceptions don't match reality. There has been great success at discovering and documenting countless visual illusions. There has been considerably less success in organizing them," says Changizi, who is the lead author on the research paper.

"My research focused on systematizing these known incidents of failed future seeing into a 'periodic table' of illusion classes that can predict a broad pattern of the illusions we might be subject to," he adds.

The new organization of illusions presents a range of potential applications, including more effective visual displays and enhanced visual arts.

It especially may help constrain neuroscientists aiming to understand the mechanisms underlying vision, says Changizi who conducted his research during a fellowship in the Sloan-Swartz Center for Theoretical Neurobiology at the California Institute of Technology.

The study has been published in the journal *Cognitive Science*.

Source: ANI

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