

Illusion

Illusion is defined as the "perception of something objectively existing in such a way as to cause misinterpretation of its actual nature". An illusion provides information as to how an individual's brain normally processes sensory information.

Illusions distort the reality of an object, thus distorting one's senses in the process. While vision is usually the most dominating among the human senses, most illusions are focused on distorting the sense of sight. There are also illusions that tend to deceive the senses due to the general assumptions and even previous memory that the brain utilize during perception.



The banner features the Explorable logo at the top center, with the text "EXPLORABLE" in a large, bold, sans-serif font and "Quiz Time!" in a smaller, cursive font below it. Below the logo are three square images, each with a white border and a white caption below it. The first image shows a pair of red roller skates on a wooden deck, with the caption "Quiz: Psychology 101 Part 2". The second image shows a fan of colorful pencils, with the caption "Quiz: Psychology 101 Part 2". The third image shows a Ferris wheel at sunset, with the caption "Quiz: Flags in Europe". To the right of the three images is a red button with the text "See all quizzes =>" in white.

Brain Processing

In 2004, a group of researchers from the University of Pittsburgh led by biomedical engineer Dr. Daniel Moran pinpointed the areas in the brain where reality and illusion are processed accordingly. The research included macaque monkeys and several humans as subjects. The experiments centered on how the subjects perceived visual tricks through letting them play a virtual reality video game. The game tricked the subjects to think that they were making elliptical traces using their hands, but in reality, they were just moving their hands in a circular motion. However, as time passed by, the researchers noted that the brain attempts to get rid of the distortions by means of adjusting its sensory system. Vision and action synchronize after some time. This synchronization occurs in the ventral pre-motor cortex of the brain, as seen below.

How it Works

One possible explanation on the occurrence and interpretation of an [illusion](#) ^[1] is that the different sensory receptor cells of the eye process and perceive colors and parts of the image at varying rates. These differences on the rates of processing may cause to the formation of a false image. The brain never stops in decoding and interpreting whatever sensory information the eye relays to it. This is an added effect to the illusion – that what we perceive is correct because we continuously "see" and "think" of the image.

Illusion and Hallucination

An illusion is different from a hallucination, such that an illusion includes the presence and misinterpretation of a physical stimulus, whereas a hallucination does not have true sensation but still has psychosensory distortion. For example, illusion is experienced when an ant crawls on a person's arm and he thinks it is a big scorpion. Hallucination is experienced when nothing crawls on his arm and yet he says that a snake is crawling on it.

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