

## **Illusions and illusionists: how to fool the brain with magic and other tricks**

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All our life, every object we see, every person we know and every incident we experience, are just the product of our imagination. Each and every one of our thoughts and feelings are the result from brain processes, and not necessarily the result of an event in the real world. The same neural machinery that interprets the sensory inputs also creates our thoughts, imaginations and dreams; thus the world we experience and the world we imagine have the same physical bases in the brain. Just as physicists study the most minute subatomic particles and the largest galactic conglomerates to understand the universe, neuroscientists must examine the cerebral processes underlying perception to understand our experience of the universe. Visual illusions are one of our most important tools to understand how the brain builds our experience of reality. Likewise, the principles developed by magicians and illusionists throughout history can be very useful to manipulate attention and awareness in the laboratory. I will discuss how the visual and cognitive illusions developed by artists and magicians can be applied to the study of the neural bases of consciousness and perception.