Shifty Eyes Fool

from New Scientist

Shifty Eye Movements Behind Famous Optical Illusion
12:12 23 September 2008
NewScientist.com news service
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The cause of an optical illusion, made famous by a 1981 painting, has finally been solved.

Neuroscientists have shown that the way our eyes constantly make tiny movements is responsible for the way concentric circles in Isia Leviant's painting 'Enigma' (see image, right) seem to flow before onlookers' eyes.

Susana Martinez-Conde and her team from the Barrow Neurological Institute in Phoenix, Arizona, tested whether the effect was down to tiny, involuntary jerks of the eyes, known as microsaccades. Their purpose is not fully understood, but the rate of these movements is known to vary naturally.

In the team's experiment, while three subjects viewed Enigma, cameras recorded their eye movements 500 times every second. The subjects were asked to press a button when the speed of the optical "trickle" of the illusion appeared to slow down or stop, and release it when the trickle seemed faster.

"We can now rule out the idea that the illusion originates solely in the brain," she told New Scientist.

Martinez-Conde adds that their research may also explain other similar illusions, such as Bridget Riley's Fall, or the Ouchi illusion. "It would be unexpected if Enigma is the only illusion affected by eye movements," she says.

See a slideshow of that illusion and others.

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