



Mixing Memory

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Cognitive stuff from a cognitive person. If you've got any requests, drop me an email. If it takes me a while to get to it, drop me another one.

The lovely banners were created by [Anton Oetli](#) and [Todd Hartman](#).

April is the cruelest month, breeding lilacs out of the dead land, mixing memory and desire, stirring dull roots with spring rain.



Reading Group

The [Mixing Memory Reading Group](#) is a place for experts and non-experts alike to discuss books and papers in cognitive science.

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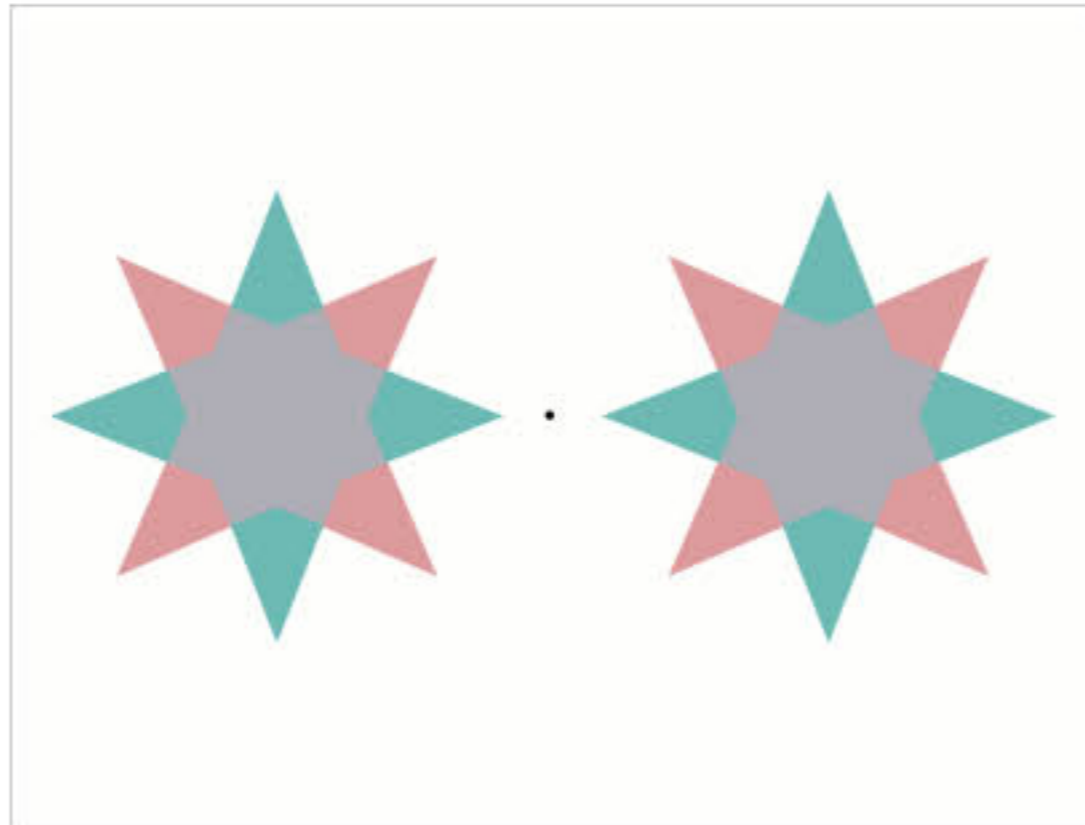
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Cool Visual Illusions: Freaky Filled In Afterimages

Category: Visual Illusions

Posted on: June 9, 2008 4:13 PM, by Chris

I love [afterimages and aftereffects](#), so I was excited to see that the 2008 winner for [Best Illusion of the Year](#) is a new afterimage illusion. To see the illusion for your self, watch this sequence of images for about 30 seconds (it takes at least 30 seconds for it to really work for me):



The illusion isn't really strong, so you may need to know what you're looking for in order to see it. What you should see is, after 20 or 30 seconds, the blank shapes start to be filled with a "ghostly" color. That's the afterimage, and though the actual colors only fill part of the the shapes, the afterimage tends to fill the whole thing. But that's not the neat part. The neat part is that the color of the afterimage (either red or green) depends on the shape of the blank figure! If it's a star (that is, if one of the four points is pointing straight up), the afterimage will be reddish, because red is the opponent color of the green in the colored figure of the same shape. If the same figure is shifted sideways 45 degrees, the afterimage is green, because the original figure of that shape was colored red. What's more, if you view one, and then the other, as in the series above, your after image immediately changes from one color to the other (e.g., red then green in the figures on the right side).

What the hell, right? My first thought was that there was some higher-level shape-color interaction going on here, but Rob van Lier and Mark Vergeer, the discoverers of the illusion, [argue](#) differently. Instead, they suggest that the illusion is "caused by a spreading of the afterimage of the coloured elements between the physical contours of the outline shape." To demonstrate this, they conducted an experiment in which they placed a circle in the middle of the blank shape, thus disrupting the original contours of the shape, and showed that the afterimage does not extend into the circle. This, they argue, is merely a low-level visual phenomenon. Of course, they've just started to explore this illusion, and the switching part still seems to be under-explained. Perhaps future research will sort it all out.

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It worked for me after the first full cycle.

Posted by: Blind Squirrel FCD | [June 9, 2008 8:52 PM](#)

IOW: eye is not simply a video camera, backed by a pixel array. Quite a bit of image processing goes on, and here we see that the gear that does that processing is subject to fatigue like that that causes afterimages.

Wouldn't mind knowing how the signal is encoded in the optic nerve. It's bound to be tres funky.

Posted by: Paul Murray | [June 10, 2008 8:38 PM](#)

Wow, fantastic!!!

Posted by: [luca](#) | [June 16, 2008 5:53 AM](#)

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