

## Rotating wheels

The wheels on the other side of this page appear to move – even though in reality they are utterly stationary.

The illusion is so strong that many people feel nauseous if they look at the image for more than a few moments – and may feel ill for some time afterwards.

Notice that only those wheels in your peripheral vision appear to rotate. When you look directly at one of the wheels, you can't 'catch' it moving!

Each wheel in the illusion is made up of four colored elements: black, blue, white and yellow – in that order.

The critical feature for making the wheels rotate is the differences in the levels of luminance (light) between adjacent elements.

This means that the illusion also works well when printed in black and white.

### Why does this happen:

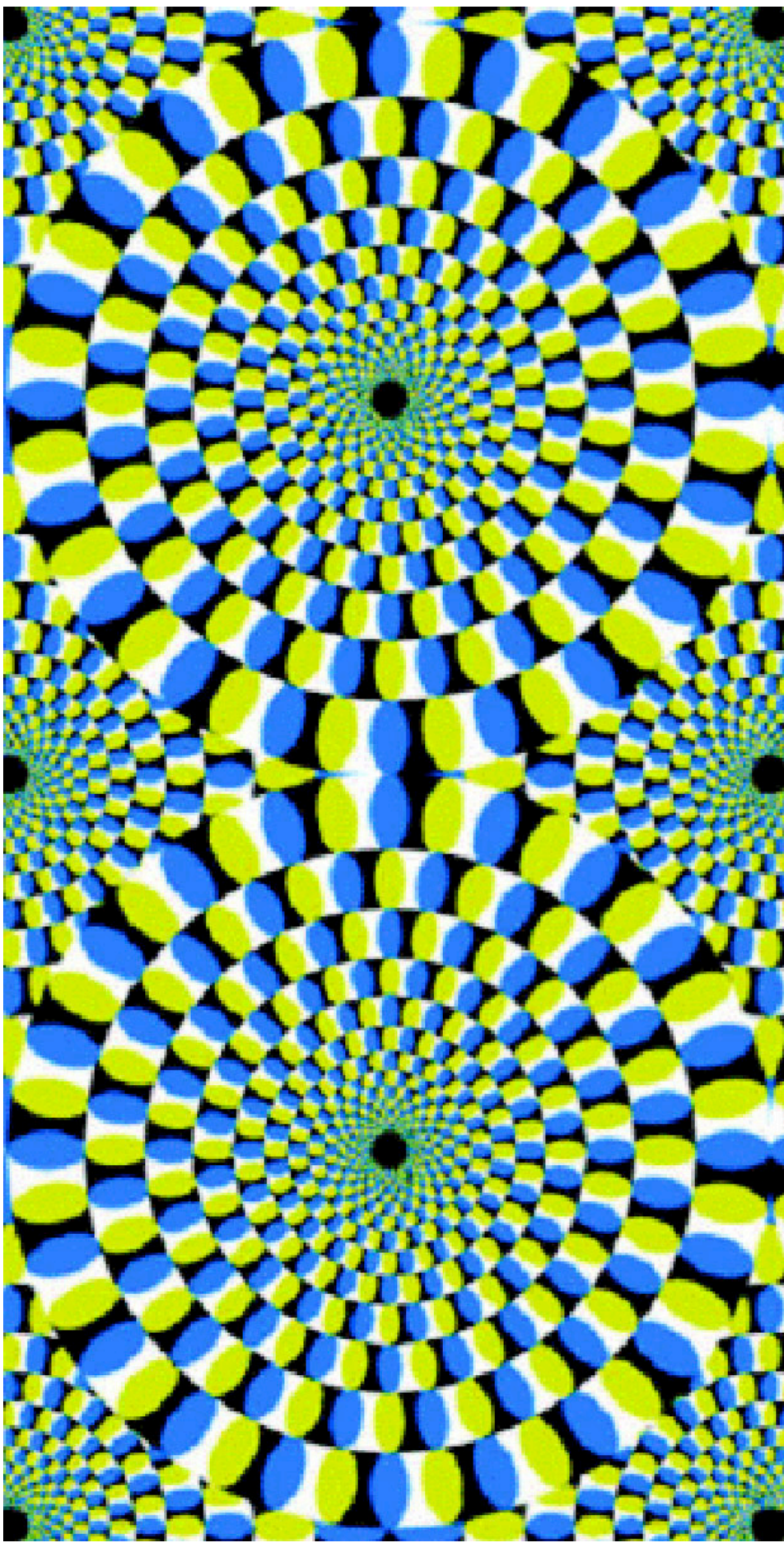
For many years scientists have known we have specific cells in our brains that fire when we look at something moving in a particular direction. These cells are called direction-selective neurons.

When scientists examined this illusion they found something quite remarkable.

Direction-selective neurons begin firing when looking at this illusion. This is particularly exciting because up until then, scientists thought this type of brain neuron could only be activated by seeing something that was really moving (either on-screen or in the real world).

Vision scientists think the cells that detect motion actually interpret the rollers as if they were really moving. Clearly, there is a lot more to be discovered about how our eyes and brain work!

**Find out more at [www.arvo.org/illusions](http://www.arvo.org/illusions)**



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