The “Where’s Waldo?” books now have a place in science. Over at the Barrow Neurological Institute in Arizona, researchers had subjects seek out the bespectacled Waldo. While the subjects scanned the pages, the researchers measured their eye movements.

The team, led by Susana Martinez-Conde, found that tiny unconscious eye movements known as microsaccades are responsible for homing in on objects of interest. Conde says the results could lead to the design of neural prosthetics for people with brain damage, and could even lead to the creation of machines that can see in the same way as humans.