

## Science News

Share Blog Cite

Print Email Bookmark

### The Truth Behind 'Where's Waldo?'

ScienceDaily (Mar. 4, 2009) — With assistance from the classic book character Where's Waldo?, researchers at Barrow Neurological Institute at St. Joseph's Hospital and Medical Center have recently made a major advance in understanding how the brain searches for objects of interest.

See also:

- Mind & Brain**
- Brain Injury
- Perception
- Psychology
- Neuroscience
- Language Acquisition
- Social Psychology

**Reference**

- Peripheral vision
- Functional neuroimaging
- Rapid eye movement
- Sensory system





Susana Martinez-Conde, PhD, and fellow researchers Jorge Otero-Millan, Xoana Troncoso, PhD, Stephen Macknik, PhD, and Ignacio Serrano-Pedraza, PhD, recently conducted a study asking participants to find Waldo. As participants searched, their eye movements were simultaneously recorded. Results showed that the rate of microsaccades – tiny, jerk-like fixational eye movements – dramatically increased when participants found Waldo.

"This discovery helps explain human searching behavior, which can assist us in finding keys on a cluttered desk or recognizing a child's face on a playground," says Dr. Martinez-Conde.

The central role of microsaccades in visual perception has been a highly debated, and vaguely understood, topic among researchers for decades. The results from the Martinez-Conde lab may help explain the correlation between microsaccades and search behavior, both in the normal brain, and in brains with visual or eye movement deficits.

"We now know there is a direct link between microsaccades and how we search for objects of interest," says Dr. Martinez-Conde. "This link can help with future advancements such as creating neural prosthetics for patients with brain damage or machines that can see as well as humans."

Adapted from materials provided by St. Joseph's Hospital and Medical Center, via EurekAlert!, a service of AAAS.

Email or share this story:    

Need to cite this story in your essay, paper, or report? Use one of the following formats:

- APA St. Joseph's Hospital and Medical Center (2009, March 4). The Truth Behind 'Where's Waldo?'. ScienceDaily. Retrieved March 27, 2009, from <http://www.sciencedaily.com/releases/2009/03/090303161313.htm>
- MLA

### Search ScienceDaily

Number of stories in archives: 44,032

Find with keyword(s):

Search

Enter a keyword or phrase to search ScienceDaily's archives for related news topics, the latest news stories, reference articles, science videos, images, and books.

Ads by Google

Advertise here

#### Thoughts Become Things

Life Does Not Have to Be This Hard Learn How to Attract Wealth Now... [www.SilvaLifeSystem.com](http://www.SilvaLifeSystem.com)

#### Learn Child Psychology

Study child psychology at home with Penn Foster Career School. [www.PennFoster.edu](http://www.PennFoster.edu)

#### Hunting Unlimited 2009

PC Hunting Game :- ) Free Trail available [www.tradebit.com](http://www.tradebit.com)

Ads by Google

Advertise here

#### Psychology School Online

Make a Difference - Launch Your Psychology Career & Help Others. [online.argosy.edu](http://online.argosy.edu)

#### Online PhD in Psychology

Earn Your PhD in Psychology Online at Capella University. Learn More! [www.Capella.edu](http://www.Capella.edu)

#### Psychology Degrees

From Walden University Online. Start Towards a Better Future! [Degrees.WaldenU.edu](http://Degrees.WaldenU.edu)

#### Mind, Brain & Education

Faculty associated w/teacher educ. Harvard U. workshop 6/29 - 7/1 [www.gse.harvard.edu/ppp/](http://www.gse.harvard.edu/ppp/)

#### "Turn Yellow Teeth White"

Read the trick, discovered by a mom to turn yellow teeth white. [CathysSuperWhiteTeeth.com](http://CathysSuperWhiteTeeth.com)

#### Related Stories

#### Research Explains How The Brain Finds Waldo

(June 8, 2005) — Using the visual system as a model, Professor Robert Desimone, director of the McGovern Institute for Brain Research at MIT, and his former colleagues at the National Institutes of Health show that ... > [read more](#)

#### A World Without Potter? (July 24, 2007) —

Children and even some adults around the globe will be saddened this weekend by the loss of a character in the famous Harry Potter book series. Author J.K. Rowling divulged last summer that two ... > [read more](#)

#### Study Provides Evidence That Autism Affects

Functioning Of Entire Brain (Aug. 16, 2006) — A recent study provides evidence that autism affects the functioning of virtually the entire brain, and is not limited to the brain areas involved with social interactions, communication behaviors, ... > [read more](#)

#### Anger Can Make You More Rational, Not Less,

According To Recent Studies (June 1, 2007) — Anger is appropriately blamed for flawed thinking since it tends to alter perception of risk, increase prejudice, and trigger aggression. But is anger always destructive? Three recent experiments ... > [read more](#)

Just In:

Why Big Fish Went Extinct 65 Million Years Ago

#### Science Video News



#### Lost And Found

Cognitive scientists ran an experiment to understand how the brain searches for an object with a known shape. They asked subjects to track the ... > [full story](#)

- ▶ Radiologists Use Digital Tomosynthesis To Produce 3-d Image Of Breast
- ▶ 1,400 Students Showcase Inventions at Science and Engineering Fair
- ▶ Colors Are Key To Keeping Your Eyes On The Game
- ▶ [more science videos](#)

Introducing the opportunity to earn more. **Add It Up™** Earn up to **20% cash back** on your online purchases, on top of retailer's discounts and credit and check card rewards. [Earn More](#) Bank of America Bank of Opportunity

#### Breaking News

... from NewsDaily.com

- ▶ Space shuttle crew prepares ship for landing
- ▶ U.S. mileage standards to rise for first time
- ▶ Italian dig uncovers "oldest" temple in Cyprus
- ▶ New MRI techniques could mean faster scans: study
- ▶ Tesla unveils four-door electric sedan
- ▶ [more science news](#)

#### In Other News ...

- ▶ Flood waters reach record high in Fargo, ND
- ▶ Bank CEOs voice support for Obama's economic plans
- ▶ Autos task force to announce plan Monday
- ▶ U.S. consumer spending, sentiment edge up
- ▶ Obama sets Qaeda defeat as top goal in Afghanistan
- ▶ Bankers told keep low profile as public anger rises
- ▶ U.N.'s Ban says slump may lead to political crisis
- ▶ U.S. mileage standards to rise for first time
- ▶ [more top news](#)

REUTERS

### Improve Your Brain

Memory
Attention
Focus
Speed
Language
Visual Perception

Spatial Reasoning
Problem Solving
Fluid Intelligence
Stress
Reaction Time
General Health

### New ways to help

[Play Games](#)

[www.lumosity.com](http://www.lumosity.com)  
Ads by Google