

Eye movements reveal readers' wandering minds

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It's not just you... everybody zones out when they're reading. For a new study published in *Psychological Science*, a journal of the Association for Psychological Science, scientists recorded eye movements during reading and found that the eyes keep moving when the mind wanders -- but they don't move in the same way as they do when you're paying attention.

Erik Reichle, a psychological scientist at the University of Pittsburgh, is interested in how the brain controls [eye movements](#). "The goal is to understand how things like word comprehension and [visual attention](#) control eye movements," he says.

Most people who study reading think that the eyes sample the information on the page and the reading mind essentially takes what it's given, without giving much direction back to the eyes.

Reichle suspected that was wrong, and thought looking at mindless reading would be an interesting way to illuminate what happens when the mind is engaged. He cowrote the study with Andrew E. Reineberg of the University of Pittsburgh and Jonathan W. Schooler of the University of California, Santa Barbara.

Four undergraduate students at the University of Pittsburgh volunteered for the project. Each one came to the lab for a dozen or more one-hour reading sessions of Jane Austen's *Sense and Sensibility*, chosen because it's "fairly easy but a little bit dry," says Reichle. "We started with

Kafka's *The Trial*, but people found it too engaging." While the student read the book on a screen, a computer tracked their eye movements. They were asked to push a button marked "Z" when they noticed themselves "zoning out." The computer also asked every few minutes if they'd just been paying attention or zoning out.

The eyes did different things while a person was [paying attention](#) than when their mind was wandering. In normal reading, the eye fixates on a word, then zips to another word. The eye spends longer on words that are less common. But when someone's mind was wandering, the eyes did not follow these patterns. They also fixated for longer on individual words.

"It was almost like they were just mechanically plodding along," Reichle says. This suggests that the prevailing belief in his field is wrong—in fact, when people are reading, eye movements are strongly linked to the language processing going on in the brain.

Provided by Association for Psychological Science

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