

# Gwen Frishkoff, PhD — Cognitive Psychologist

## SEARCHING FOR WORDS? IT COULD BE YOUR MOOD

Want to increase your brain's capacity to access a complex and robust vocabulary? Get in a better mood.

According to cognitive neuroscientist and psychologist Gwen Frishkoff, PhD, a person's emotional state can significantly affect his or her ability to comprehend words. An assistant professor at Georgia State University, she has discovered how positive and negative moods affect word comprehension, along with the specific areas of the brain that are accessed as words are read.

"I've always loved reading and thinking, so there's a kind of visceral excitement I get when I hit on a technique for understanding how people do those things," she says.

Frishkoff's doctoral dissertation at the University of Oregon grew out of earlier research showing how the right brain and left brain work together to gather deeper emotional meaning from words. By studying language and cognition through experimental techniques, she has found that the brain's left hemisphere is more active during negative moods and the right hemisphere is more active during positive moods.

So if that chapter you just read doesn't seem to be clicking, go for a run. Mood-boosting activities such as daily exercise can keep your endorphin levels up and your brain in high gear.

## HEAD GAMES

How does Frishkoff determine what's happening in people's brains? In her Brain Electrophysiology of Language and Literacy Systems (BELLS) lab, she uses complex scientific tools, like the dense-array electroencephalogram (EEG), to study brain activity. Using multiple electrodes placed along the scalp, the EEG measures and records brain activity, tracking how brain cells talk to each other through tiny electrical signals called impulses.

Frishkoff led a multi-state project funded by the National Institutes of Health called NEMO (Neural ElectroMagnetic Ontologies). Ontology is a branch of metaphysics concerned with the nature of being or existing. NEMO's goal is to create EEG tools for use in ontology and understand their link to cognition.

## BUILDING BETTER READERS

Frishkoff's work relates to readers of all ages. She plans to apply her findings to measure what brain areas are used as children and adults learn new words. Of particular interest are ages 9 and 10, a time when young people sometimes experience a slump in reading comprehension.

It's all about making the right connection.

"I'm hoping to see consistent effects of word learning that we can link to the specific abilities, such as fluency and self-monitoring," says Frishkoff. "We'd like to know what skilled readers are doing and figure out the best way to introduce words so readers can take them in, assimilate them and become better readers."



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### BRAIN SCIENCE AND COGNITIVE PSYCHOLOGY

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