"Oh look! It's what's-her-face"

Mary Sakacs

By Mary Sakacs

Have you ever been in a situation where you see someone you recognize but for some reason you can't remember their name? It can be quite an awkward situation, and while you may greet them and be smiling on the outside, you're intensely rummaging around your brain for a name—hoping they don't realize that you have forgotten it. This is a common situation, but no one ever seems to wonder why it is that we can remember a face but not always a name.

At the <u>University of Bristol</u> [1], a study was completed that explained how people recognize faces better when we have familiar clues reminding us when we came across them in the past. Dr. Clea Warburton and Dr. Gareth Barker from the University's School of Physiology and Pharmacology found that in order for someone to remember any type of object, including a person's face, there are three areas of the brain that must work together to make that connection: perirhinal cortex, hippocampus, and the prefrontal cortex. The first region differentiates what objects are familiar to us and the ones that aren't. The hippocampus focuses on recognizing familiar places and for navigation, and the prefrontal cortex is associated with higher brain functions that associate with our thoughts, actions, and objectives. Dr. Warburton and Dr. Barker concluded that only when all three of these brain regions are working together can we remember a specific object from an exact time.

Both doctors proceeded to find that our brain has two types of recognition memory. Object-in-place recognition memory is what they use to describe memory for where things are, while temporal order recognition describes when things happened. However, for the brain to remember both, the hippocampus and either the perirhinal cortex, or the medial prefrontal cortex must work together in order to remember objects and events in the proper order that they occurred. From this it is evident that all areas of the brain need to work collectively in order for memory to be correct and consistent. The researchers published these findings in the *Journal of Neuroscience*.

Findings such as these are very important for doctors because understanding how the brain works can be helpful in understanding different disorders, in this case memory disorders. Comprehending that all regions must work jointly to grasp all

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types of memories can be beneficial when treating people with memory disorders such as Alzheimer's disease.

Mary Sakacs is a student at Fairleigh Dickinson University majoring in Communications studies. She is currently an editorial intern at Bioscience Technology.

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[1] http://www.bristol.ac.uk/news/2011/7846.html