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## The Brain That Reorganizes Itself

An interview with Professor Allison Sekuler  
Neuroscientist, McMaster University

### How does the brain change as we age?

The first thing we need to do to be able to figure out – how do we improve people’s lives? – is to figure out what’s affecting their lives right now. The fastest growing segment of the population is 65 and older. But we know almost nothing about how the brain changes as a function of aging. We also do work in face recognition. And we actually know almost nothing about how it is that we are able to recognize faces to tell who’s friend and who’s foe. So although these are things we sort of deal with every day, and so we think they are very simple, we don’t really understand the science behind them. So that’s one of the things we’re trying to figure out.

### What have you discovered so far?

There’s been almost no work on the cortical changes in aging, and the way that aging affects our ability to interact with the world. Just to perceive what’s out there so that we can interact with it appropriately. So what we have found so far, which is really, I think, promising, is that the human brain, as we age, can actually kind of reorganize itself. So if it comes up against a problem where it doesn’t have the resources available, it can actually kind of recruit areas that are normally used in young people for other sorts of things. So if we can’t see as well, we are able to sort of make use of parts of the brain that would normally be used for memory and attention, to help us see and to help us hear; so we get the information in there. And now the question is: can we train people to be able to do those sorts of tasks and still be able to remember something and still be able to attend to things? So the more we understand about those sort of basic elements of how the brain can reorganize itself, the more we can sort of planfully help brains reorganize themselves, so old people can lead happier lives.