

Scientists study background brain activity

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A U.S.-led team of neuroscientists has determined the 98 percent of brain activity considered background noise is, in fact, important.

Indiana University Associate Professor Olaf Sporns and doctoral student Christopher Honey note brains are always active, even when people are at rest. In the "resting state," waves of neural activity ripple through the brain, creating fluctuating and ever-changing patterns. Sporns and Honey say such offer insights into what the brain does while idle.

"Some people see the brain in terms of inputs and outputs, like a computer. If you provide an input, you'll get a particular output," said Honey. "We take a different view. We believe that even in the absence of an external stimulus, there are very important processes going on in the brain which affect the stimulus-responses that the brain will produce. We believe that ongoing spontaneous activity should be studied in itself."

The research -- conducted with neuroanatomist Rolf Kotter of Radboud University in the Netherlands and cognitive neuroscientist Michael Breakspear of the University of New South Wales in Australia -- appears in the early online edition of the Proceedings of the National Academy of Sciences.

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