Please Mind the Gap: How to Podcast Your Brain

Karen Spaceinvaders

Please scan the QR code to access the mp3 files of deep brain recordings of individual brain cells, the smallest unit of the brain, in a whole, intact living brain. Each brain region’s cells possess an electrical signature. During recordings electrical signals are transformed into sound to facilitate auditory identification of cells during a process called “mapping.”

Mapping is an important step in successfully identifying and localizing the appropriate target site in the brain for an experimental therapeutic procedure called deep brain stimulation which has been used for patients with movement disorders and, more recently, for patients with psychiatric disorders.

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1 Editor’s suggested resources: Michael Gazzaniga’s lecture, “Free Yet Determined and Constrained” at Edinburgh University Gifford Lectures on October 19, 2009 is an excellent discussion of the field. It can be viewed on Edinburgh University’s YouTube channel: https://www.youtube.com/watch?v=aGtZek7RPts; Patricia A. Reuter-Lorenz, Kathleen Baynes, George R. Mangun, and Elizabeth A. Phelps (eds), The Cognitive Neuroscience of the Mind (Cambridge: MIT Press, 2010).
I have pursued a career as a neuroscientist for the past decade because I wanted to learn about the mind. In my most recent research, I record electrical activity from individual cells in the brain, and look at individual brain cells with a high resolution, electron microscope.

The closer I examine the brain, the less I learn about the mind. Rather, what has been most informative about the mind is how people – neuroscientists and non-neuroscientists alike – interpret neuroscience data. Some cognitive neuroscientists have proposed the qualities we hold most precious as humans, like morality and free will, exist only in the context of human interaction. Likewise, I propose that the mind does not exist in a vacuum and one’s mind only necessitates distinction in a social context, and the mind’s existence may only be relevant due to its relative relationships. In sum, bodies have brains. People have minds.

I invite readers to reflect on and/or refute these statements after listening to these recordings of the brain in action. These regions are part of the cortico-basal ganglia-thalamo-cortical circuit, which is thought to possess parallel, functionally segregated loops including a motor-movement circuit and limbic-emotional circuit which work together to generate behavior (e.g. motivated movements) and have been researched for their role in Parkinson’s disease as well as Obsessive Compulsive Disorder.