

The Brain, in Exquisite Detail

By JAMES GORMANJAN. 6, 2014



ST. LOUIS — Deanna Barch talks fast, as if she doesn't want to waste any time getting to the task at hand, which is substantial. She is one of the researchers here at Washington University working on the first interactive wiring diagram of the living, working human brain.

To build this diagram she and her colleagues are doing brain scans and cognitive, psychological, physical and genetic assessments of 1,200 volunteers. They are more than a third of the way through collecting information. Then comes the processing of data, incorporating it into a three-dimensional, interactive map of the

healthy human brain showing structure and function, with detail to one and a half cubic millimeters, or less than 0.0001 cubic inches.

Dr. Barch is explaining the dimensions of the task, and the reasons for undertaking it, as she stands in a small room, where multiple monitors are set in front of a window that looks onto an adjoining room with an M.R.I. machine, in the psychology building. She asks a research assistant to bring up an image. “It’s all there,” she says, reassuring a reporter who has just emerged from the machine, and whose brain is on display.

And so it is, as far as the parts are concerned: cortex, amygdala, hippocampus and all the other regions and sub regions, where memories, fear, speech and calculation occur. But this is just a first go-round. It is a static image, in black and white. There are hours of scans and tests yet to do, though the reporter is doing only a demonstration and not completing the full routine.....

For further details please check the following website

http://www.nytimes.com/2014/01/07/science/the-brain-in-exquisite-detail.html?_r=0