



Pure Genius

Relatively speaking, everyone can now have Albert Einstein's brain

It's so ingenious I wish I'd thought of it. The folks at National Museum of Health and Medicine Chicago have put Einstein's brain in an app for the iPad.

When Albert Einstein died in 1955, Dr. Thomas Harvey, who performed the autopsy, removed the Nobel Prize-winning physicist's brain for study. He segmented the brain into parts that were further partitioned and mounted on microscope slides.

After Dr. Harvey died in 2007, the slides were donated to NMHMC, which began the process of digitizing the slides so they could be preserved and viewed electronically. The portion of the collection that has been digitized to date is now available to the public in an app named **NMHC Harvey**. The app will be updated as the digitization process continues.



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InSites

Mainly for brainiacs

The subject matter, microscopic tissue samples, and the price — \$9.99 is a little steep for an app — will most likely keep the general public from clamoring for it. For doctors and scientists who study the brain though, it's a remarkable resource.

We are so inundated with technology that we take it for granted. Just think how amazing it is that one of the greatest minds of the 20th century can be analyzed at a microscopic level by anyone in the world with just a few clicks on an iPad. For less than \$10.

From Einstein's brain

- "The only reason for time is so that everything doesn't happen at once."
- "I know not with what weapons World War III will be fought, but World War IV will be fought with sticks and stones."
- "Put your hand on a hot stove for a minute, and it seems like an hour. Sit with a pretty girl for an hour, and it seems like a minute. THAT'S relativity."
- "Not everything that counts can be counted, and not everything that can be counted counts."
- "Learn from yesterday, live for today, hope for tomorrow."
- "For every one billion particles of antimatter there were one billion and one particles of matter. And when the mutual annihilation was complete, one billionth remained — and that's our present universe."
- "Imagination is more important than knowledge."
- "Education is what remains after one has forgotten everything he learned in school."
- "I never think of the future. It comes soon enough."
- "The difference between stupidity and genius is that genius has its limits."

The app does just what it's supposed to do without many bells or whistles. It's basically a collection of tissue samples from various regions of the brain and brain stem. The slides are organized by how they are stained, by either myelin, which

gives them a sepia tone that shows nerve conductive tissue, or missl, which produces a bluish-purple hue that highlights cellular structure. Each slide can be panned and zoomed in to the cellular level. There's also a button to share the slides via email.

Mind mapping

The collection is organized in the opening screen with a graphic known as a mind map. This consists of a centrally located circle labeled "regions." Lines radiate out from the central circle connecting to five orbiting circles labeled with different sections of the brain.

Clicking on a section generates another web radiating out from it with more subdivisions at the end of each line. When you click on one of the final subdivisions in the chart, it takes you to the actual slide image.

The mind map is a visually compelling way to organize the information. Unfortunately, the animation in the map is slow and clunky. If they could get it to work more quickly and smoothly it would be a much better experience.

While this app is not likely to become the next Angry Birds, it represents the enormous potential of mobile technology. How long until your doctor is sending you sophisticated imagery from your own medical tests to help you make life-changing decisions? The possibilities are mind boggling. After all, you can now look at Albert Einstein's brain in the palm of your hand.

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