

Why the Human Brain Project was doomed to fail

In 2005 neuroscientist [Henry Markram](#) embarked on a mission to create a supercomputer simulation of the human brain, known as the [Blue Brain Project](#). In 2013 that project became the [Human Brain Project](#) (HBP), a billion-euro, 10-year initiative supported in part by the European Commission. The HBP polarized the neuroscience community, culminating in an open letter last July signed by nearly 800 neuroscientists, including Nobel Prize–winners, calling the HBP’s science into question. The critics were eventually vindicated, as a mediation committee called for a total overhaul of the HBP’s scientific goals.

So, what was wrong with the Human Brain Project? And what are the implications for how we study and understand the brain? The HBP, along with the U.S.’s [multibillion-dollar BRAIN Initiative](#), are often compared to other “big science” endeavors, such as the Human Genome Project. But given how much of the brain’s workings remain mysterious, is big science the right way to unlock its mysteries and cure its diseases?

The HBP’s main approach to brain simulation was “bottom up,” meaning researchers would start with as much detailed data as possible, plug it all into a computer, and then observe what emerges out of the simulation. But this massive bottom-up approach to brain simulation, many researchers argue, is [premature at best](#), and fundamentally flawed at worst. A bottom-up simulation requires that researchers enter a huge amount of detailed data, so a reasonable question to ask is, where to start? Which level of detail should we use for the simulation?

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full original post: The Big Problem With “Big Science” Ventures – Like the Human Brain Project