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BY CYNTHIA HOCHSWENDER

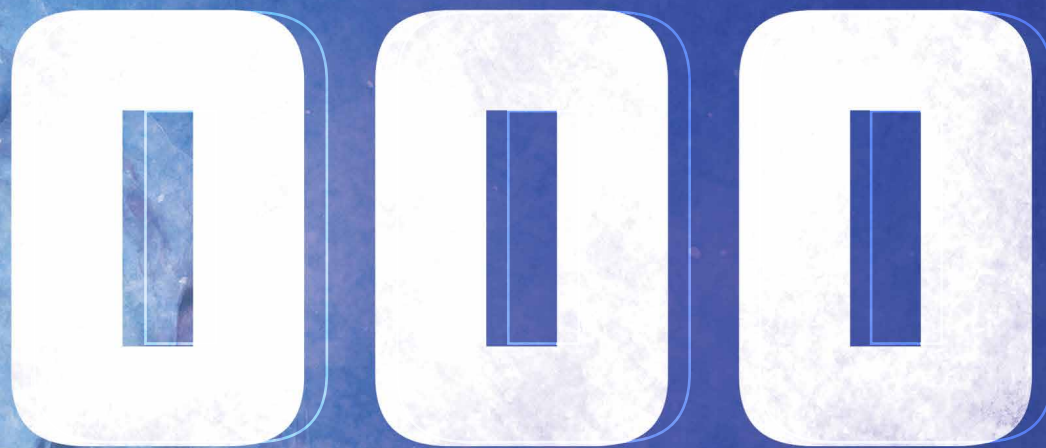


Everett Cook, cofounder of the 10,000 Brains Project, donned a white coat for a recent visit to the Neuropathology Brain Bank and Research CoRE at the Icahn School of Medicine at Mount Sinai, New York City. The Brain Bank was created to meet the need for high-quality human tissue in research by combining diagnostic expertise, innovative technologies, and a culture of collaboration.

ESSING

EVERETT COOK'S nonprofit initiative incorporates AI to battle neurodegenerative diseases

Photos by Luiza Pikora



BRAINS

Anyone who is the least bit anxious about robots taking over the world might feel some trepidation at the idea that artificial intelligence is now being used to study the human brain all the way down to the molecular level. In the wrong hands, this might end up being a kind of fox-in-the-henhouse moment.

Fortunately, what is now called The 10,000 Brains Project is safely in the hands of **Everett Cook '69**. When Cook describes the work of the nonprofit organization that he co-founded three years ago and now co-chairs, there is no possible response other than to feel a sense of optimism.

The ultimate goal of the project, Cook explains, is to prevent, treat, and possibly cure neurodegenerative diseases through the application of artificial intelligence. First, however, researchers must have access to the massive human-derived datasets that are needed to drive the new AI algorithms.

"This involves collecting and harmonizing existing data in genetics, proteomics, and patient records associated with brain tissue," he says. "The problem is that the brain tissue from neuropathology

labs does not exist in the digitized form that is required for computational approaches."

Brain tissue provides ground truth in this field, but it is largely inaccessible, gathering dust in file drawers and freezers around the world. These samples have been collected by doctors and researchers who are struggling to understand the extremely complex mechanisms of the human brain – and to figure out what happens when something goes wrong. With the help of AI, massive progress can be made in a relatively short time; without AI, the work could take centuries.

More than just cataloging and distributing the information, AI can spot patterns and anomalies that humans are likely to miss – especially when those humans are siloed in labs all over the world, with little to no contact with one another.

Neurodegenerative disorders touch nearly everyone on the planet. They manifest as depression, psychosis, and anxiety; as Parkinson's disease and Alzheimer's disease; as Lewy body and other dementias. Everyone knows someone who is suffering from one or more of these devastating conditions.

There are no known cures for them, and there is limited understanding of what causes them. Meanwhile, the incidence of neurodegenerative disease is increasing. At present it is estimated that 60 million people are afflicted worldwide, and that number is expected to rise to 150 million by 2050.

FROM MEMPHIS TO MANHATTAN

A Memphis native, Everett grew up on a large farm in Germantown. His father, Edward W. "Ned" Cook, was chairman and CEO of Cook International (1964-1995), a firm founded by his grandfather, Everett R. Cook, in 1916 as Cook & Co., cotton shippers. (It was later expanded to include grain as well.)

Everett and his brother, **Edward Cook '67**, both attended Presbyterian Day School and MUS, along with all their friends.

"It was a sort of PDS tradition to go on to MUS," Cook recalls. "The school was very focused on values, discipline, and education; and they offered the support that was needed to help us be good students and good citizens."

After completing seventh and eighth grades, Cook went on to Woodberry Forest School, a boarding school for boys in Virginia; and then to Dartmouth in New Hampshire, an all-male college at the time.

He didn't purposely seek out all-male schools, he says. "But I do believe there is a place for them. There are definite advantages to it, especially in grades seven to nine. Women mature more rapidly, both mentally and intellectually, than men; they're about two years behind women in terms of the physical development of the brain up until age 30."

Between ages 13 and 22 Cook focused his energies on preparing to work in the family's cotton and grain business. By the time he finished college – and before



Dr. John Crary, left, founder of the Neuropathology Brain Bank and Research CoRE at Mount Sinai's Icahn School of Medicine, is the scientist who suggested creating The 10,000 Brains Project. He was also the first member of the nonprofit's Scientific Advisory Board.

returning to Dartmouth to complete his MBA – he had worked in almost every aspect of the business and had lived and worked in nine cities and five countries. Shortly after he completed his MBA, though, his father sold the family's main enterprises to a Japanese conglomerate. Cook decided he would go to New York City and work in finance.

MAKING CONNECTIONS

Goldman Sachs was one of the many firms he visited. During the interview process, he met a woman who seemed always to have the word “trailblazer” in front of her name. Karen Strauss was the first female equities trader at the famed global financial services firm, the company's third woman in a professional role. At that time, she was already on par with senior traders at the firm in terms of committing capital in block trading.

Three years later, they married and then had two sons, Everett and Conor. In 1987 Karen left Goldman to spend more time at home with the boys.

Cook's family was deeply involved in their Memphis community. His grandfather co-founded the Cotton Carnival, now

known as Carnival Memphis. His father was chairman of the Airport Authority, and he was instrumental in getting Federal Express, founded by **Fred Smith '62**, to move from Little Rock to Memphis. The MUS Fisher Fine Arts Wing was named through a gift from the Cook Foundation, made possible by Everett's dad, honoring President of Cook Industries Hubert F. Fisher, Jr.

In Everett and Karen's life together, it was Karen who focused more on philanthropy. “She always wanted to affiliate with successful organizations where she could play a meaningful role,” he says. “For me, it was something I kind of evolved into.”

AFTER 27 HAPPY YEARS OF MARRIAGE, COOK NOTICED CHANGES IN HIS WIFE THAT WORRIED HIM.

After 27 happy years of marriage, Cook noticed changes in his wife that worried him. She became obsessed with exercise. She began to act impulsively, sometimes in self-destructive ways such as running out

into traffic in Manhattan. Both their sons were at Vanderbilt University at that time and were spared much of the early years of their mother's decline. Soon others began to notice. After the boys went away to school, Karen began to work in finance again. Eventually, her boss called Cook and said, “I think Karen has a brain disease.”

‘WHY AM I HERE?’

Brain diseases are especially challenging to diagnose. The brain is a complicated organ that no one completely understands yet. Making it even more difficult, the patient suffering from a neurodegenerative decline is often the least aware that something is wrong.

“She only admitted there was something wrong one time,” Cook recalls. More common was her question when they made their first visit to a neurologist: “Why am I here?”

And there were many, many doctor visits as Cook tried desperately to find out what was wrong – and to see if there might be a way to treat it.

“We went to 14 neurologists before we got a diagnosis that was even close,” Cook says. That is, 14 neurologists in New

York City, Boston, and Rochester, Minnesota, all among the best in the world.

The answer finally came in 2008, from a doctor at Brigham and Women's Hospital in Boston. A doctor there saw evidence of a rare disease known as progressive supranuclear palsy (PSP). An autopsy performed after Karen's death finally revealed the truth: It was cortical basal degeneration (CBD), a related but distinct disorder.

Following the diagnosis, the Cooks began five long years of caregiving and decline, followed by Karen's death in 2013.

In the years that followed, there was little time for Cook to mourn. He had his own work, he had to help tie up the loose ends at his late wife's fund-of-funds business, and he had two sons to launch (both have done extremely well, in finance and as entrepreneurs).

However, he found himself drawn into the world of trying to understand neurodegeneration. First, he connected with an organization called CurePSP, which led him to the Scientific Advisory Board of the Rainwater Charitable Foundation's Tau Consortium, founded by Texas financier Richard Rainwater, who died in 2015 from PSP. (Tau proteins are believed to be at the root of many degenerative brain diseases.)

CHAMPION FOR THE CAUSE

Cook is one of those people everyone wants to put in charge, and he ended up with leadership and board roles at CurePSP and the Tau Consortium.

He helped research and pitch the PBS documentary *Defeating Dementia*. While working on the project, he learned more about neurodegenerative diseases and became excited about the possibility of using AI to make greater advances. (In late May PBS announced internally that the three-part, \$7 million documentary has begun production, and they expect a release date sometime in late 2027.)

Through the Tau Consortium, he met Dr. John Crary, a neuropathologist at Mount Sinai Hospital in Upper Manhattan who was interested in using AI in neuropathology.

In 2023 Cook, Crary, and the producers of *Defeating Dementia* created The 10,000 Brains Project to change the way brain research is done. The founding CEO is Patrick Brannelly, a former managing director of the Tau Consortium and senior executive with Gates Ventures' Alzheimer's Disease Data Initiative.

The name derives from the concept that it will take 10,000 brains – of patient advocates, investors, and scientists – working together to solve this problem, Brannelly says. "And we want to gather tens of thousands of brain tissue samples," he adds, to study with the help of

artificial intelligence.

For now, the only true way to know what's gone wrong with a brain is to do an autopsy after someone has passed away. Brannelly says that if we are willing to change the way research is done, we will find ways to give families and patients a real answer as to what exactly is ailing them. With these new approaches, we can also find better ways to prevent, slow down, and treat brain disorders.

The hope is that more brain tissue samples can be digitally scanned at ultra-high resolution, and the files can be shared around the world instantly. (Currently, largely due to bureaucratic barriers, researchers can wait up to two years to obtain brain tissue.) Doctors and scientists can form networks to analyze the data and share their findings. Artificial intelligence can be used to do what it does best – analyze massive datasets and find

10,000 BRAINS PROGRESS REPORT

10,000 Brains co-founders **Everett Cook '69** and Patrick Brannelly (CEO) report the following progress in the digital brain banking project:

- Secured \$3 million from the Kissick Family Foundation to establish the required technology infrastructure and to digitize brain tissue from 1,000 frontotemporal dementia patients.
- Established a \$2 million partnership with the Michael J. Fox Foundation and ASAP Initiative to digitize tissue from 2,000 Parkinson's patients from five leading academic sites in four countries.
- Signed on to serve as the digital neuropathology core for the nation's network of Alzheimer's Disease Research Centers and raised \$1 million to create the world's largest collection of digitized Alzheimer's tissue.
- Obtained pre-existing data from 1,000 patients with primary age-related tauopathy (PART), a distinct patient subgroup that has been traditionally mischaracterized as Alzheimer's disease.
- Secured \$100,000 to generate an initial dataset from 50 ALS patients.
- Co-founded the C-BRAIN consortium, a \$10 million public-private partnership that will use the 10,000 Brains datasets to develop AI-based lab assistants that will be made openly available to the global research community.





Everett Cook with the research team at the Neuropathology Brain Bank and Research CoRE at Mount Sinai.

meaningful patterns where even the most talented humans cannot.

Cook begins his presentations about 10,000 Brains by noting that he studied history and business in school, not science. But he learned a lot, and fast, during his wife's illness. More than that, however, he has found himself at the head of this neurology organization because, frankly, he's a guy who brings people together, gets things done, and compels donors to step up.

He cites the words of his grandfather,

a World War I ace pilot, as inspiration: "Nothing is ever perfect, and you'll always get a lot of flak. You have to look to your left, look to your right, and if you're still flying, just keep going!"

At 75, Cook is fit, handsome, and active. He has homes in upstate New York (where he is a governor of the Millbrook Hunt) and Florida. He is learning to fly small planes, and he still comes back to Memphis from time to time to sample its many delights.

"I love barbecue, I love the blues, I love

duck hunting. I still have friends in Memphis; my son's godfather, **Jake McFadden '71**, an alumnus of MUS, is there."

He recently stepped back from daily duties at the private equity firm he co-founded, Poushine Cook Capital, in part so he can devote more time to the essential work of 10,000 Brains; in part so he can spend time with his new grandchild, Olympia, and enjoy life with Helen Watson Blodgett, a longtime friend to whom he has been happily married for 11 years. ■