I grew up to study the brain because I have a brother who has been diagnosed with a brain disorder: schizophrenia. And as a sister and later, as a scientist, I wanted to understand why is it that I can take my dreams, I can connect them to my reality, and I can make my dreams come true. What is it about my brother’s brain and his schizophrenia that he cannot connect his dreams to a common and shared reality, so they instead become delusion?

So I dedicated my career to research into the severe mental illnesses. And I moved from my home state of Indiana to Boston, where I was working in the lab of Dr. Francine Benes, in the Harvard Department of Psychiatry. And in the lab, we were asking the question, “What are the biological differences between the brains of individuals who would be diagnosed as normal control, as compared with the brains of individuals diagnosed with schizophrenia, schizoaffective or bipolar disorder?”



So we were essentially mapping the microcircuitry of the brain: which cells are communicating with which cells, with which chemicals, and then in what quantities of those chemicals? So there was a lot of meaning in my life because I was performing this type of research during the day.

But then in the evenings and on the weekends, I traveled as an advocate for NAMI, the National Alliance on Mental Illness. But on the morning of December 10, 1996, I woke up to discover that I had a brain disorder of my own.

A blood vessel exploded in the left half of my brain. And in the course of four hours, I watched my brain completely deteriorate in its ability to process all information. On the morning of the hemorrhage, I could not walk, talk, read, write or recall any of my life. I essentially became an infant in a woman’s body.

If you’ve ever seen a human brain, it’s obvious that the two hemispheres are completely separate from one another. And I have brought for you a real human brain. So this is a real human brain.

This is the front of the brain, the back of brain with the spinal cord hanging down, and this is how it would be positioned inside of my head. And when you look at the brain, it’s obvious that the two cerebral cortices are completely separate from one another. For those of you who understand computers, our right hemisphere functions like a parallel processor, while our left hemisphere functions like a serial processor.

The two hemispheres do communicate with one another through the corpus collosum, which is made up of some 300 million axonal fibers. But other than that, the two hemispheres are completely separate. Because they process information differently, each of our hemispheres think about different things, they care about different things, and, dare I say, they have very different personalities.

Our right hemisphere is all about this present moment. It’s all about “right here, right now.” Our right hemisphere, it thinks in pictures and it learns kinesthetically through the movement of our bodies. Information, in the form of energy, streams in simultaneously through all of our sensory systems and then it explodes into this enormous collage of what this present moment looks like, what this present moment smells like and tastes like, what it feels like and what it sounds like.

I am an energy-being connected to the energy all around me through the consciousness of my right hemisphere. We are energy-beings connected to one another through the consciousness of our right hemispheres as one human family. And right here, right now, we are brothers and sisters on this planet, here to make the world a better place. And in this moment we are perfect, we are whole and we are beautiful.

My left hemisphere — our left hemisphere — is a very different place. Our left hemisphere thinks linearly and methodically. Our left hemisphere is all about the past and it’s all about the future. Our left hemisphere is designed to take that enormous collage of the present moment and start picking out details, details and more details about those details. It then categorizes and organizes all that information, associates it with everything in the past we’ve ever learned, and projects into the future all of our possibilities.

And our left hemisphere thinks in language. It’s that ongoing brain chatter that connects me and my internal world to my external world. It’s that little voice that says to me, “Hey, you gotta remember to pick up bananas on your way home. I need them in the morning.”

Eventually, the whole number gets dialed and I’m listening to the phone, and my colleague picks up the phone and he says to me, “Woo woo woo woo.” (Laughter) And I think to myself, “Oh my gosh, he sounds like a Golden Retriever!”