What Do Neurologists Say About God?

Rev. Roger Fritts
Unitarian Universalist Church of Sarasota
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A few years ago, a church member passed on to me a Times of London newspaper account of research conducted in California. The article described how a man suffering from temporal lobe epilepsy walked into a doctor's office in San Diego wearing a huge cross and carrying a 500-page book he had written on the nature of God. The neurologist (whose religion is Hindu), Dr. Ramachandran, reported that about 25 percent of his patients with temporal lobe epilepsy are obsessed with religion. After an attack, patients may speak of having had a "religious experience," or say that they now "know why the cosmos exists." Other symptoms of some temporal lobe epileptics can be the act of writing a long complicated book of personal religious significance and frequent conversions to several different religions in sequence.

Let’s watch a brief video: to 1:23
https://www.youtube.com/watch?v=qIiIsDIkDtg

In his research, Dr Ramachandran compared three groups of people. He looked at a group of epileptic patients who described these religious experiences. He looked at a random sample of people who do not have epilepsy and who were not especially interested in religion. Third, he looked at people who said that they were intensely religious.

Electrical monitors were placed on the skin of the people in these three groups. This is a standard test for activity in the brain's temporal lobes. They showed that the epileptics and the deeply religious people displayed a similar response when shown words invoking spiritual belief.

By studying these people who have profound spiritual experiences, Dr. Ramachandran located a circuit of nerves in the front of the brain that appears to be electrically active when these persons think about God. He suggests that the phenomenon of religious belief is "hardwired" into our brains.

Dr. Ramachandran believes that the epileptic patients' seizures caused damage to the pathway that connects two areas of the brain: the one that recognizes sensory information and the one that gives such information emotional context. The San Diego neurologist says, "Everything becomes very significant. These patients see depth in every little thing." Some people suffering from seizures may believe that they have had a firsthand experience of the existence of God.

By studying these epileptics who have profound spiritual experiences, Dr. Ramachandran located a circuit of nerves in the front of the brain that appears to be electrically active when these persons think about God. He suggests that the phenomenon of religious belief is "hardwired" into our brains. Dr. Ramachandran says, "There may be dedicated neural machinery in the temporal lobes concerned with religion. This may have evolved to impose

order and stability on society."

This neuroscientist suggests that belief in God, which is a common trait, found in human societies around the world and throughout history, may be built into our brain's complex electrical circuitry to encourage cooperation between individuals.

Two years after reading about Dr. Ramachandran, I picked up a *Wired* magazine and read about a study in Canada. A Sudbury, Ontario neuropsychologist has been studying the effect of low-level electromagnetic fields on the human brain.

Sudbury is a nickel and copper mining town of about 150,000 people. Laurentian University consists of a dozen buildings in the suburbs of the town. Dr. Michael Persinger and his graduate students do their research in the windowless basement of the university's science building. There in a tiny room built in the early 1970s is a recliner chair.

Dr. Persinger was born in Jacksonville, Florida, but he moved from the United States to Canada in July 1969, because he had in his own words "a rather major ethical disagreement" with the United States Government. To conduct his research, he uses a yellow motorcycle helmet fitted with electromagnetic field-emitting switches on the sides, aimed directly at the subject’s temples. Sitting in a silent black vault, Dr. Persinger bathes the subject's temporal lobes with precise electromagnetic wavelength patterns. Using fixed wavelength patterns of electromagnetic fields, he claims he can inspire a feeling of a sensed presence.

Let us watch:

Start at the one-minute mark and stop at 5:41

https://www.youtube.com/watch?v=y02UlkYjSi0

Dr. Persinger suggests those supernatural visions of God or of angels are caused by natural electromagnetic fields stimulating our brain. One of the Doctor's students has turned this into a business. Today on the internet, you can buy magnetic stimulation devices that claim to stimulate intense spiritual experiences. A few years ago, I bought one. So far I have not seen God.

Persinger has exposed the brains of more than 2000 people to low level electromagnetic fields with precise wavelength patterns. Using the helmet, people report seeing Elijah, Jesus, the Virgin Mary, Mohammed, and God. Some people have the sense that there is a presence in the room with them. The person feels at one with the universe, feels a kind of eternal peace, feels that somehow the experience has changed their sense of self forever.

Two years later, I read a third magazine article, a *Newsweek* cover story entitled "God and the Brain.” The article was about research in Pennsylvania. A Philadelphia researcher, Dr. Andrew Newberg (whose religion is Jewish) has been studying the minds of praying Franciscan nuns and meditating Tibetan monks. He published a book on the subject called

“Why God Won't Go Away.” Dr. Newberg's specialty is radiology. To conduct his experiment he started by taking a baseline scan of a subject's brain state at rest. Then he hooked the subject up to a long intravenous line. He tied a string to a finger allowing the Franciscan nun or the Tibetan monk to signal to him when they entered the deepest stages of prayer or meditation. At that signal the doctor injected a radioactive dye into the intravenous line, waited for the prayer or meditation to finish, then did a brain scan detecting radioactive emissions. The injected radioactive tracer locks almost immediately into brain cells and stays there for hours. Thus, the brain scan gave the doctor an image of blood flow patterns as they occurred just moments after the injection. Let us look at such a scan of the brain of a nun at prayer as Dr. Newberg talks. [0 to 3:01]

https://www.youtube.com/watch?v=SbPeBcB1Rz0

The scans showed increased activity in the frontal lobes. However, Dr. Newberg also found decreased activity in one part of the brain. The decreased blood flow was in the area of the brain that primarily orients us in space, keeping track of which way is up or down, forward or behind, and helping us judge distances and angles. This is the part of the brain that tells us the difference between us and everything else. Apparently, in deep meditation this part of the brain decreases in activity.

Dr. Newberg believes that our brain interprets its failure to find the borderline between the self and the outside world to mean that such a distinction does not exist. The brain perceives that the self is endlessly interwoven with everyone. This perception feels utterly and unquestionably real for those in prayer or in meditation. They feel they have touched infinity.

Dr. Newberg concludes that "Unless there is a fundamental change in the brain, religion and spirituality will be here for a very long time. The brain is predisposed to having those experiences and that is why so many people believe in God."

Therefore, in San Diego a neuroscientist is studying why religious experiences seem to accompany epileptic seizures in some patients. In Sudbury, Ontario, a professor of neuroscience creates a religious experience using electromagnetic waves. And in Philadelphia a researcher discovers how the brain functions during deep meditation and prayer.

- For atheists, this research supports the belief that God is a creation of the human brain.

- For theists, the research supports the belief that God designed the human brain so that it is possible under the right conditions to feel God's presence.

Personally, I have never seen an angel or had a vision. I am a rational, logical Unitarian Universalist, and I find it interesting that people, who have felt the presence of God or seen an angel or had a vision, may have simply experienced a special stimulation of their brain caused by an epileptic seizure or by electromagnetic waves, or by the slowing of blood flow to part of the brain. I will continue to read about such research with great interest.

Still, this research does not cause me to embrace atheism. I continue to trust that the universe has intentionality, a purpose a meaning. Most of us can see. Understanding how our vision works, understanding how our brain sees things does not then mean that what we see with our eyes is an illusion. In the same way, if we understand better how our brains feel the presence of God, this does not necessarily prove that the feeling is an illusion.

I look at the vastness of the visible universe, of the billions of stars. I look at how much we have learned as human beings in just the last century and how much is still a mystery. I hold on to the belief that a purpose exists.

I believe that we experience this purpose through a special relationship we have with people, with the earth and with works of art like music and paintings. It occurs when I exchange a smile with a friend at church on Sunday morning. It is the fleeting sense of purpose I feel when we hear the sounds of beautiful music. It is the fleeting sense of connection I feel when I hear the lines of a beautiful poem. It is the fleeting sense of relationship I feel when I laugh with others. Someday with a portable brain scanner, it might be possible to study what happens inside my brain when I see a friend, look at a beautiful painting, listen to music, or smell a flower. I will be interested in the results of such research. However, I do not think that knowing more about the way my brain works will shake my belief that the universe has intentionality, a purpose, a meaning.

Those times when I feel a part of this intentionality, part of this purpose, I find that life seems richer and fuller; failures and disappointments seem more bearable and grief more acceptable. In spite of the poverty and injustice, in spite of the violence and the wars, we are slowly making progress in the effort of human beings to understand the nature of life and the universe. All of us share in this progress.