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Speaking In Tongues Deemed Normal, Unconnected To Brain Abnormalities

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Researchers incurred skepticism following work attempting to explain glossolalia, the phenomenon of speaking in tongues, with use of brain-mapping imagery. Creative Commons

From the Southern literary tradition of Flannery O'Connor to 21st century America, Pentecostals and other religious practitioners have been known to sometimes speak a "natural language" of unknown origin, one which springs spontaneously from the mind as an expression of spiritual communion.

And just as reflexively, perhaps, pseudo-neuroscientists reach for their tool chest, replete with functional magnetic resonance imaging and electroencephalogram, sometimes misused as a modern pseudoscientific snake oil to be sold to the unwitting public, in this case to readers of the peer-reviewed journal *Neurocase*.

Casting out the demons of junk science, *Discover Magazine* snappishly described a recent effort by researchers to pinpoint the neurological basis of glossolalia, the phenomenon of speaking in tongues observed since at least the "Gospel according to Mark" and "The Confession of St. Patrick" of 5th century Ireland.

Researchers examined a 44-year-old woman, who appeared one day at an outpatient clinic complaining of muscle tension and headaches persisting for several months, with friends worried about an atypical jerking of her left arm during glossolalia, something that only occurred during the phenomenon. The woman, whose name was not disclosed, said she's spoken in tongues for some 20 years, learning the practice while attending church services. The experience, she said, left her with a deep feeling of peace and tranquility — it was the other symptoms that bothered her.

A brain scan and other medical tests revealed nothing out of the ordinary, so researchers sought to replicate the arm jerking by measuring the woman as she experienced glossolalia, something she was only willing to do silently in the clinical setting, out of respect for the Holy Spirit. As the woman entered a meditative state, researchers indeed observed heightened electrical activity in the right posterior temporal region, perhaps throwing them into a heightened state of activity.

Though seemingly legit, the researchers might have overstated the significance, according to Discover: "The fact that the suspicious signal came from the right temporal lobe also fits with the woman's left arm jerks, because the right side of the brain controls the left side of the body," they wrote. "However, so what? These kind of results are always intriguing, but this one should serve as a reminder that brain activity can be caused by behavior, as well as causing it."

Taking issue also with the researchers' usage of glossolalia as a verb, Discover said the experiment provided no evidence abnormal electrical activity caused the phenomenon of speaking in tongues, though the scientific effort left some scratching their heads. No scientist in his or her right mind, for example, would publish conclusions based upon just one research subject.

Since 1927 to as late as 2003, scientific efforts to explain glossolalia - even with modern tools of measurements — have failed. In 1969, a research team from the University of Minnesota dispelled assertions by psychologist Geore Cutten in 1927 attributing the phenomenon to mental illness or low intelligence. In 2003, the religious journal Pastoral Psychology reported a statistical study of 991 clergymen finding glossolalia unrelated to any psychopathology.

Other critics now question the funding at all of psychological neuroscience, an obsession that might... border on the grotesque.