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# Renowned uOttawa neuroscientist's research disputes brain's ability to know God



# by Susan Hickman

Our brain is not really capable of knowing of God's existence, says an Ottawa neuroscientist who is working to better understand illnesses of the brain.

Dr. Georg Northoff made the comment in late March following a one-week tour of Europe, where he addressed several hundred scientists, theologians and lay people at Germany's University of Marburg, as well as audiences in Austria, Switzerland and Italy.

"Our knowledge of ourselves and the environment is based on our brain," explains Dr. Northoff, "and our brain may have some limitations."

As Canada Research Chair in Mind, Brain Imaging and Neuroethics at the University of Ottawa's Institute of Mental Health Research and a clinician at the Royal Ottawa Mental Health Centre, Dr. Northoff uses imaging technology to uncover brain disorders.

Internationally recognized for his research into brain function, Dr. Northoff is combining such imaging techniques as magnetic resonance imaging and magnetic resonance spectroscopy in new ways to study patients suffering from depression and schizophrenia. His investigation could result in better diagnoses and treatments for these illnesses.

His lab is also using imaging techniques to look for brain mechanisms that underlie emotions and examining such questions as what is the 'self' and how do we develop our sense of self.

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Dr. Northoff says that religious scientists' beliefs are very much aligned with his findings on the brain, but some of those with strong beliefs about God are furious with his discussions.

"I ask them how they can know God exists. Ultimately they say they believe it or feel it and I say, 'Well, that's not knowledge.' The discussion eventually hits a boundary."

Dr. Northoff admits he cannot answer the question about what he personally believes in.

"It's a philosophical question," he says. "I accept and respect anybody who believes in something, but I personally do not believe in a particular God."

Nevertheless, Dr. Northoff is very interested in examining why some people assume God's existenceexists.

"There have always been religious beliefs since the beginning of human existence," says Dr. Northoff, who grew up Catholic. "By linking the brain and belief, we can learn something about ourselves."

Dr. Northoff received a \$1-million endowment grant from the EJLB Foundation last summer when he was awarded the EJLB-CIHR Michael Smith Chair in Neurosciences and Mental Health. Funding from the Canadian Institutes of Health Research (CIHR) and as well as the Institute of Neurosciences, Mental Health and Addiction is supporting Dr. Northoff's leading-edge research.

"For a neuroscientist like me, we live in very exciting times," notes Dr. Northoff. "We are starting to unravel how the brain might function and what it means for traditional philosophical concepts. We may have to redefine our concepts of self and belief as we examine the empirical data."

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#### Comments (6)

La croyance en Dieu n'est pas un acte de connaissance, mais bien un acte de foi. D'ailleurs, l'essentiel de notre vie quotidienne est davantage guidé par nos croyances que par nos connaissances. Les sciences naturelles sont limitées et ne peuvent tout expliquer. En d'autres termes, une explication ne constitue pas un acte de création. À tout vouloir contrôler, observer et mesurer, certains tenants des sciences naturelles se posent en absolu et visent à occuper la place de Dieu.

By André Samson Ph.D. on 2010 04 15

### Comments (6)

It is courageous of DR. Northoff to broach this subject. It seems we all agree that there are things beyond our ken ("There are more things in heaven and earth, Horatio..."), yet we find ways to disagree vehemently about such matters.

By Bianca Sherwood on 2010 04 15

### Comments (6)

For an interesting and provocative take on this issue, I recommend Ricky Gervais' recent film "The Invention of Lying".

Or Jacques Brel's song: Dites, si c'etait vrai.

By P Roberts on 2010 04 15

## Comments (6)

Je suis tout à fait d'accord avec le commentaire du Dr André Samson. La science ne peut pas tout régler. Croire en Dieu est un acte de foi et cela n'a rien à faire avec le fonctionnement de notre cerveau.

By Dr Ronald Dansereau, M.D. on 2010 04 15

### Comments (6)

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Using the scientific method to consider the existence of God.

- 1. The scientific method can prove that an explanation (hypothesis) is not correct when that explanation is not consistent with the observations (experimental data).
- 2. However, the scientific method cannot prove that an explanation is true. It can only show that the explanation is consistent with the observations. Any consistent explanation (2) will remain until inconsistent observations (1) are found.

We observe that nature is both complex and highly ordered. One explanation is that some form of intelligence created nature. That intelligence can be called God. Therefore the creation of nature by an intelligent God is consistent with the observations.

By Marten Ternan on 2010 04 17

#### Comments (6)

I think that Dr. Northoff commits a classical logical fallacy in confusing the substrate, the brain, with logical thinking (for which the brain—like the lungs or heart, for that matter—is an obviously necessary but insufficient condition. Neuroscience was not available—nor was it needed—by philosopehrs and other thinkers who, for centuries, have been quite capable of constructing logical arguments and arriving at valid conclusions without it. Arguments about the existence of God are a matter of logical argument and deduction, about which neuroscience has virtually nothing interesting to say. (The existence of a personal God who cares about human beings, on the other hand, is a very different matter, one that does indeed rely on faith.) In sum, neuroscience has essentially nothing to add to what is at its core a logical and ontological (i.e., philosophical) question. (I'm not holding my breath, either, for any revolutionary neuroscientific insights into the self, a quest that also confuses the substrate and the products of cognition.)

By Robert Flynn, PhD on 2010 04 19

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