



# Gay Brains Structured Like Those of the Opposite Sex

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June 16, 2008 —

Brain scans have provided the most compelling evidence yet that being gay or straight is a biologically fixed trait.

The scans reveal that in gay people, key structures of the brain governing emotion, mood, anxiety and aggressiveness resemble those in straight people of the opposite sex.

The differences are likely to have been forged in the womb or in early infancy, says Ivanka Savic, who conducted the study at the Karolinska Institute in Stockholm, Sweden.

"This is the most robust measure so far of cerebral differences between homosexual and heterosexual subjects," she says.

Previous studies have also shown differences in brain architecture and activity between gay and straight people, but most relied on people's responses to sexuality driven cues that could have been learned, such as rating the attractiveness of male or female faces.

## Brain Symmetry

To get round this, Savic and her colleague, Per Lindström, chose to measure brain parameters likely to have been fixed at birth.

"That was the whole point of the study, to show parameters that differ, but which couldn't be altered by learning or cognitive processes," says Savic.

First they used MRI scans to find out the overall volume and shapes of brains in a group of 90 volunteers consisting of 25 heterosexuals and 20 homosexuals of each gender.

The results showed that straight men had asymmetric brains, with the right hemisphere slightly larger and the gay women also had this asymmetry. Gay men, meanwhile, had symmetrical brains like those of straight women.

The team next used PET scans to measure blood flow to the amygdala, part of the brain that governs fear and aggression. The images revealed how the amygdala connected to other parts of the brain, giving clues to how this might influence behaviour.

## Depression Link