

Laterality Newsletter

2015 issue

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A personal selection of some recently published studies

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Naughty thoughts, hemispherically

When a person thinks about naughty things, does one side of the brain get more exercised than the other? Eight scientists led by Debra Lieberman, a professor of evolutionary psychology at the University of Miami, studied that question. Their report, 'Hemispheric asymmetries during processing of immoral stimuli' appears in the journal *Frontiers in Evolutionary Neuroscience*. The stated goal is to describe the neural organisation of moral processing.

The researchers had to work with a few limitations – the same limitations that apply to anyone who tries to describe what's going on in the brain.

With the exception of a few crackpots or geniuses, scientists don't claim to understand how the 100,000,000,000 or so parts of the brain manage to think thoughts. Many of those multitudinous parts are connected to each other in complex ways that are quirkily different in every person. Some of the connections change over the course of a life, or a day, or even a few minutes. Many tiny brain parts are clumped into big conglomerations, some quite distinct (hello, cerebellum!), but others have fuzzy locations and borders.

The study does not risk getting bogged down in those larger, complicated conundrums. It restricts itself to the simple question: How does immorality play out in the brain?

The scientists sought their answer by recruiting some test subjects. They confronted each volunteer with several levels of immorality, in the form of words and images.

The team used MRI machines to indirectly (via electromagnetic emissions) monitor where largish amounts of blood flowed in the brain as each volunteer confronted each level of immorality. In theory, anyway, blood flows most freely near whichever brain parts are actively thinking, or have just thought, or are just about to think, or are busily doing something else.

In one test, volunteers saw different kinds of printed statements. Some were about pathogens ('You eating your sister's spoiled hamburger', 'You sipping your sister's urine', 'You eating your sister's scab'); some about incest ('You giving your sister an orgasm', 'You watching your sister masturbate', 'You fondling your

sister's nipples'); some about nonsexual immoral acts ('You burgling your sister's home, You killing your sister's child'); and others about neutral acts ('You reading to your sister, You holding your sister's groceries').

In other tests, volunteers saw other kinds of statements or pictures, each chosen for its evident moral content.

After all the immorality was seen, and the

measurements made, the researchers calculated that the left side of the brain had been more involved than the right side. Thus, concludes the study: 'There is a left-hemisphere bias for the processing of immoral stimuli across multiple domains.'

This is extracted from **Marc Abraham's** book *This Is Improbable Too* (Oneworld, £6.29). Seen in *The Psychologist*.

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