

Aston University
Birmingham

SCIENCE GIRL

Wow!
WOMEN OF THE WORLD
FESTIVAL 2014
Bloomberg

Fighting the NeuroTrash:
How to Tell NeuroNews from NeuroNonsense

Gina Rippon,
Aston Brain Centre, Aston University

WOW FESTIVAL, LONDON MARCH 2014

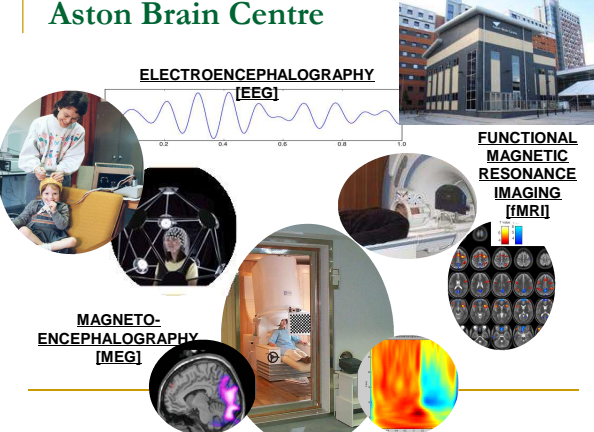
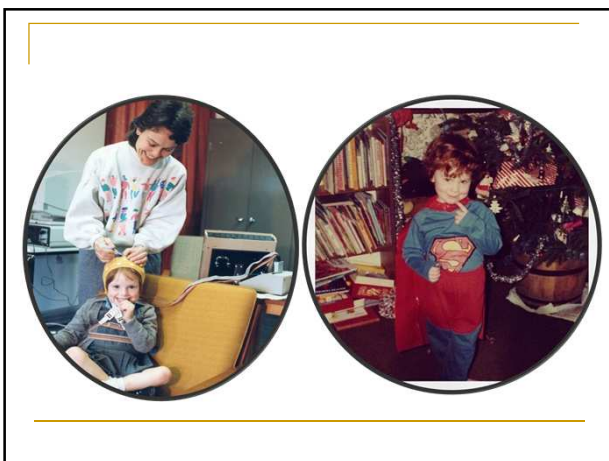


Aston Brain Centre

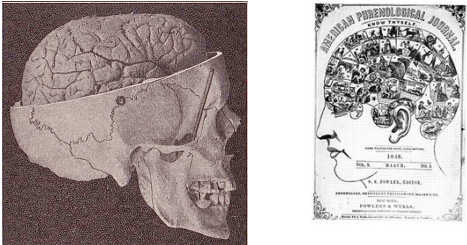
ELECTROENCEPHALOGRAPHY [EEG]

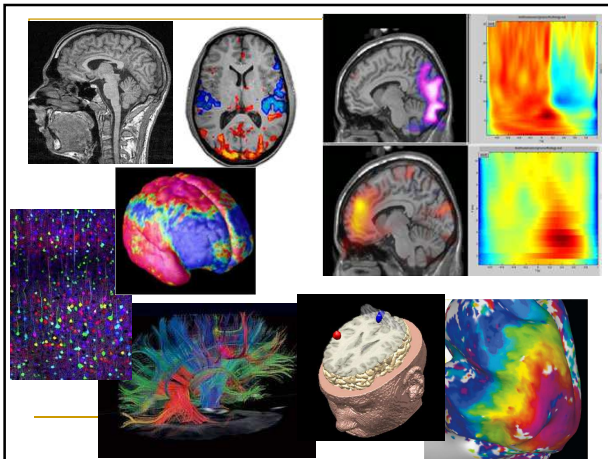
FUNCTIONAL MAGNETIC RESONANCE IMAGING [fMRI]

MAGNETO-ENCEPHALOGRAPHY [MEG]

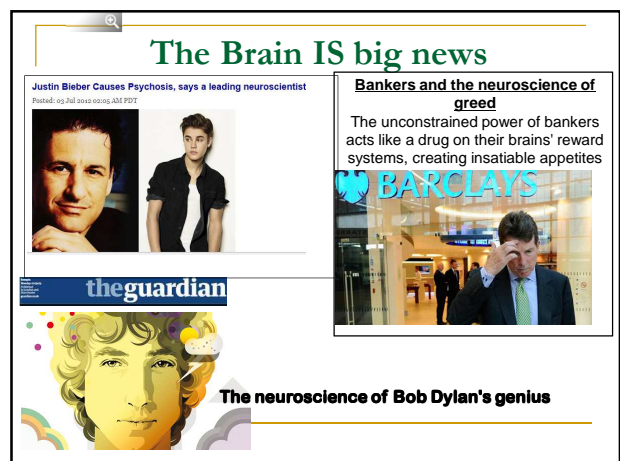



Early brain imaging: ball bearings and bumps



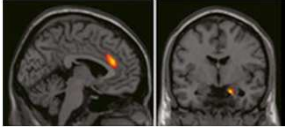


Our Brains are plastic ALL of our lives




MailOnline
Our political allegiances could be hard-wired into our brains, neuroscientists believe.


Tory voters found to have larger 'primitive' lobe in brain
By DAILY MAIL REPORTER
UPDATED 05:17, 29 December 2010



Lefty or righty? A new study links a larger anterior cingulate cortex (*left*) to politically liberal views and a larger right amygdala to conservatism.



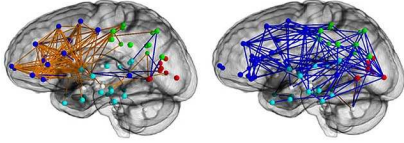
Brain buddies? Conservative Prime Minister David Cameron (right) is more likely to have a thicker amygdala while Liberal Nick Clegg could be expected to have a larger anterior cingulate.



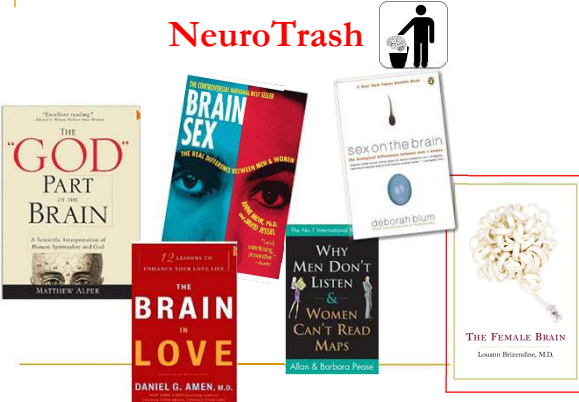
But not always good news.

MailOnline

Men's and women's brains: the truth! As research proves the sexes' brains ARE wired differently, why women's are cleverer ounce for ounce - and men can't read female feelings

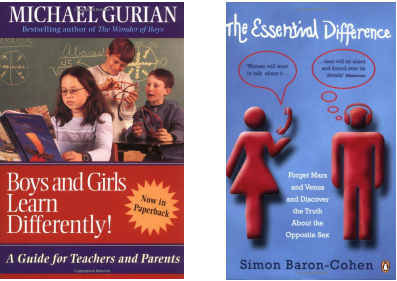


NeuroTrash



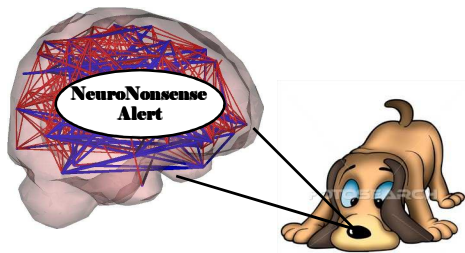
The image displays a collection of books and a brain diagram under the heading "NeuroTrash". The books include "The God Part of the Brain" by Matthew Alper, "Brain Sex: The Real Difference Between Men & Women" by Simon Baron-Cohen, "Sex on the Brain" by Deborah Blum, "Why Men Don't Listen & Women Can't Read Maps" by Alison & Barbara Pearce, "The Female Brain" by Louann Brizendine, MD, and "The Brain in Love" by Daniel G. Amen, MD. A small icon of a person throwing trash into a bin is also present.

**NeuroTrash:
Sustaining Stereotypes**

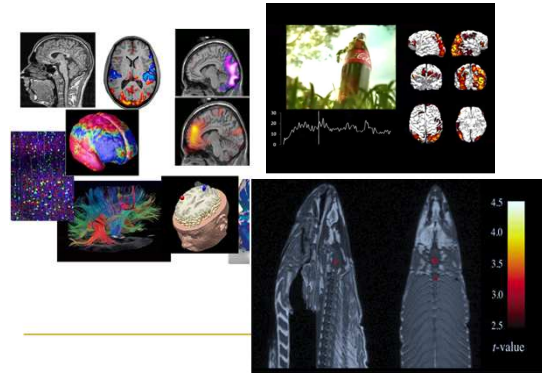


The image shows two book covers. The left cover is "Boys and Girls Learn Differently!" by Michael Gurian, described as "A Guide for Teachers and Parents". The right cover is "The Essential Difference" by Simon Baron-Cohen, with the subtitle "Targets: Men and Women and Discover the Truth About the Opposite Sex".

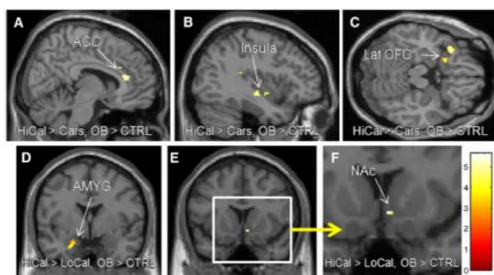
The Solution – NeuroNonsense Sensitivity Training.



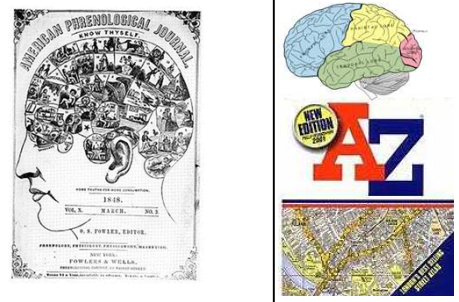
Mind Reading or Smoke and Mirrors?



Beware the Mind Reading Illusion ('Reverse inference' problem)



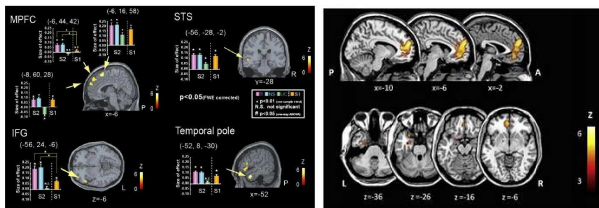
Beware the Brain 'Mapping' Illusion



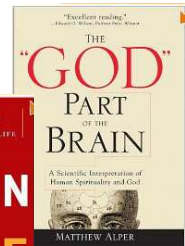
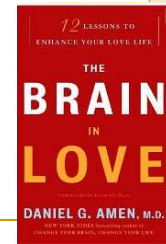
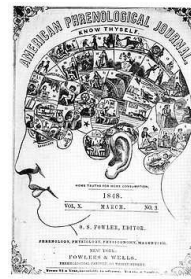
The 'Moving' Sarcasm Centre

Uchiyama et al (2006) *Brain Research*

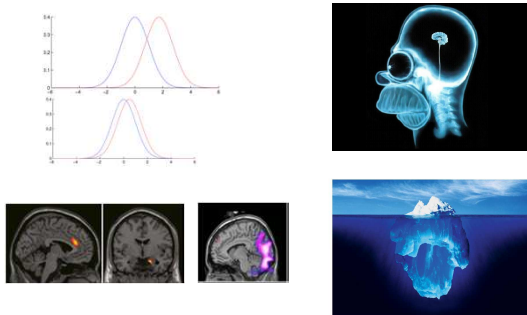
Uchiyama et al (2011) *Cortex*



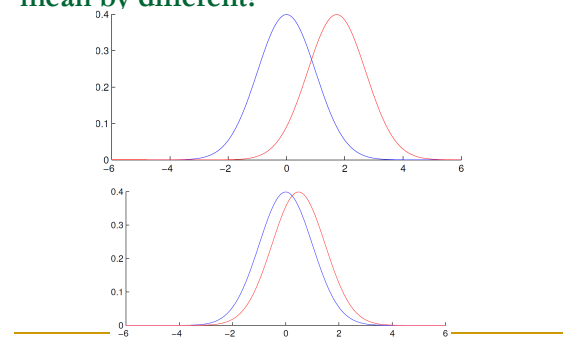
Beware neophrenology - There's no such thing as a chocolate spot



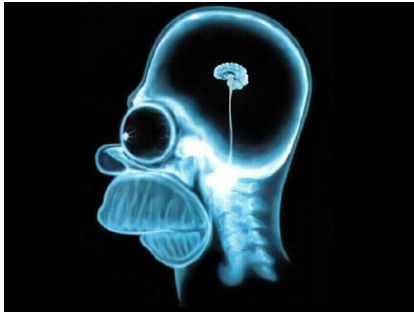
'Size Matters' Matters



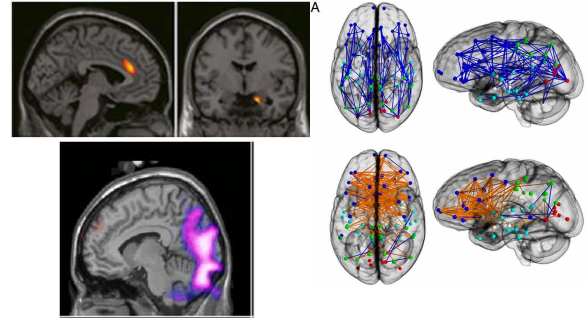
Size matters – effect size – what DO we mean by different?



Size matters: the bigger the head, the bigger the brain



Size matters: more is better?



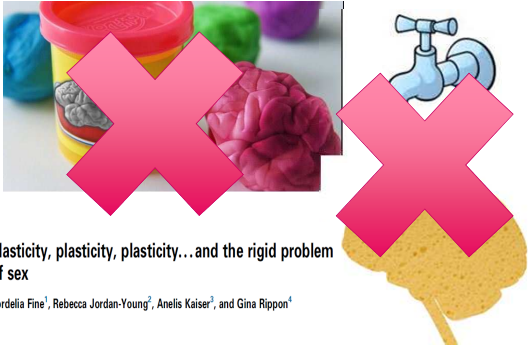
Size Matters - Publication Bias



Sustaining stereotypes

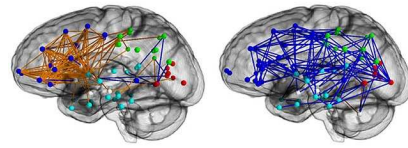


Biology IS Destiny

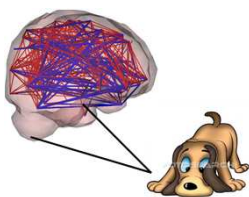


MailOnline

Men's and women's brains: the truth! As research proves the sexes' brains ARE wired differently, why women's are cleverer ounce for ounce - and men can't read female feelings



Nose out NeuroNonsense



- Is there a 'Mind Reading' 'Illusion'
- Is there a 'Mind Mapping' illusion (the chocolate spot trap)
- Is there a 'Size matters' issue?(have they reported effect size?)
- Is there a whiff of 'Biology is Destiny'?
- Are stereotypes being sustained?

NeuroNonsense

Alert
THE FEMALE DIGNITY
Louann Brice, M.D.



You can't live with them, and you can't live without them!

**MEN are from MARS
WOMEN are from VENUS**

Get seriously involved with the classic guide to surviving the opposite sex.

JOHN GRAY

This Author is from Uranus

THANK YOU!



Aston University
Birmingham

