

Where have all the girl scientists gone?

September 8 2014, by Louise Ogden

A neuroscientist from Aston University has unveiled research which challenges assumptions of the reasons behind an under-representation of women in science, technology, engineering and mathematics (STEM) subjects.

The lack of female scientists is seen as a major economic problem by the Government, which has tried to boost numbers with several initiatives. But despite this, [public perception](#) often furthers the myth that women cannot engage with STEM subjects because of innate biological deficits.

Speaking at the British Science Association's press launch for the upcoming British Science Festival, Professor Gina Rippon told delegates that mainstream opinion on the reasons for low female engagement in science ignores scientific understanding of the plasticity and permeability of the human brain.

The research is aimed at emphasising that any biological explanations of [gender differences](#) need to take into account the importance of the social and [cultural context](#) in the development and maintenance of such differences.

In essence, there are very few differences between the brains of men and women – the social context is what creates the gender differences.

The focus is not just on patterns of brain activity during problem-solving, but also on demonstrating that how a problem is presented, and

to whom, can affect the outcome. For example, in single sex teams, girls tend to work in quite egalitarian but competitive ways because they all want a voice and to be heard, while boys are more likely to work co-operatively with each other once they have accepted a leadership hierarchy within a team.

Professor Gina Rippon said:

"We really cannot afford to sit back and accept the 'essentialist' view that girls are not going to be interested in science subjects because of some 'brain deficiency'. We need more trained scientists and engineers but 50% of our pool of talent is not engaging. People who could study these subjects or do these jobs are choosing not to. This must not be explained away by misguided and misleading explanations in terms of unchangeable biological characteristics, or references to 'the natural order of things.'"

Professor Rippon added:

"The focus should not just be on 'fixing the girls' but also on 'fixing the [science](#)'.

"If STEM subjects were commercial products or an item in an election manifesto, then the marketing gurus would be pulling out all the stops to make the products more accessible, more attractive, more 'choosable' – not blaming the consumers."

Gina presented her findings at the British Science Festival on Sunday 7 September at the University of Birmingham.

Provided by British Science Association

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