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Boys set adrift by dud science

The gulf between the sexes may be somewhat overstated, writes Cordelia Fine | *July 25, 2007*

IT'S a hard time to be a man. Everywhere - in newspapers, magazines and bestselling books - are descriptions of the neurological inadequacies that supposedly explain why boys and men are such emotional dunces.

In his highly influential book Why Gender Matters, for example, Leonard Sax tells parents and teachers of an extraordinary design flaw in the male brain.

In young boys and girls, says Sax, emotion is processed in the primitive, basic parts of the brain. As girls approach adolescence, the cerebral cortex - the talking, reflective, reasoning parts of the brain - also becomes involved, allowing older girls and women to understand and talk about their feelings. But in boys, this useful link between emotion and distinctly human capacities is never properly forged. Male emotion remains mute and incomprehensible in the deep, dark parts of the brain.

As Sax puts it: "In boys, as in men, the part of the brain where emotions happen is not well connected to the part of the brain where verbal processing and speech happens. Asking a teenage boy to talk about how he feels (is to ask) him to make connections between two parts of his brain that don't normally communicate."

Immediately, we think of the prehistoric caveman fuming inarticulately in his cave. No wonder he reaches for his club, especially if his cavewoman is a little too outspoken in her complaints. Louann Brizendine, author of the bestselling The Female Brain, warns that "(m)en's brain circuits and bodies may readily revert to a physical expression of anger fuelled by the frustration of not being able to match women's words".

Do the neural circuits of males really condemn them to such pitiful emotional illiteracy? I live with no Shakespeare or Milton, it's true, but I have noticed an absence of neither alacrity nor eloquence in my husband when it comes to expressing his feelings about my more irritating habits. I had never regarded my husband's often moving and intense emotional self-insights as any more than the normal output of a functioning adult human. Yet perhaps, I began to wonder, they deserved more wholehearted praise: a clasping of hands and thrilled cry of, "Well done! You tunnelled through to the communication centre!"

I like to give credit where it is due. And so I read the neuroscientific research on which this popular claim about the male brain is based. Immediately, I plunged into the strange world of pseudo-science. Journal articles that on a reference list seem to offer impressive support for bold claims, on closer inspection turn out to offer findings that are tangential, ambiguous or simply irrelevant.

Many of these articles - and the claims about sex differences that they have inspired - come under scrutiny in the online forum Language Log. Here, University of Pennsylvania professor Mark Liberman meticulously exposes with weary humour the gaping chasms between scientific fact and popular interpretation.

He concludes that many writers who use neuroscience to "explain" boys' needs present research in a way that is "shockingly careless, tendentious and even dishonest. Their over-interpretation and misinterpretation of scientific research is so extreme that it becomes a form of fabrication."

Liberman patiently corrects Brizendine's many false assertions about males' inferior capacity for communication - a chore that, as he puts it, "is starting to make me feel like the circus clown that follows the elephant around the ring with a shovel".

But with little of this critical analysis reaching the popular press, the brain-based myth of incoherent male emotion persists and is used to bolster gender stereotypes. Recently, for example, well-known Australian child psychologist Michael Carr-Gregg claimed emotion and language parts of the brain that are one and the same in girls are completely different in boys.

According to Carr-Gregg, this "fact" about boy and girl brain structure "explains so much": including, apparently, why girls like pink and cuddle trucks, and boys rip the heads off Barbies.

As it happens, Barbie is not necessarily safe in the hands of a girl either. Agnes Nairn of the University of Bath found that girls are frequently violent towards their Barbies (the forms of abuse include pulling out hair, microwaving and burning, as well as decapitation). But even setting aside neurological and psychological laxities, the idea that the location of emotion and language processing in the brain can explain girls' colour preferences or boys' aversion to Barbie dolls simply makes no sense.

Unfortunately, we are unlikely to even notice. According to Yale psychologist Deena Skolnick Weisberg and her colleagues, neuroscientific explanations enjoy a "seductive allure". In an article to be published in The Journal of Cognitive Neuroscience, Skolnick Weisberg shows how our normally accurate radar for nonsensical psychological explanations lets us down badly as soon as impressive-sounding neuroscientific terms creep into the picture.

When she added neuroscience to illogically circular explanations, people's ratings of how satisfied they were with the explanations tipped from negative to positive. In fact, even students on an introductory course in cognitive neuroscience were dazzled by neuroscience in just the same way.

Saddest of all for boys and men, these crowd-pleasing neuroscientific explanations can also subtly change the way we see our own nature. Biological, rather than socio-cultural, explanations of gender differences leave us more inclined to agree with stereotypes and to regard human nature as immutable, research has shown.

This "boys will be boys" attitude may result in us doing boys and men a great disservice.

Psychologists, journalists and science communicators should be wary of swallowing and regurgitating unexamined titbits about male neurological limitations. After all, what will happen if we let boys and men off the emotional hook in the classroom and at home because we think their brains simply aren't up to it? We run the risk of precipitating the fulfilment of that false prophecy.

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