Finding sex differences

OUR report from the British Association Festival (October 2005) quoted David Skuse as saying: 'The theory that autism is the extreme of the male brain is not strongly supported by these data.' These data referred to Skuse's new study that whilst girls were better than boys at recognising emotions at age six, this sex difference had disappeared by late adolescence; and that there was no difference at any age in boys' and girls' ability to remember faces or to detect eye contact. I think Skuse may be overstating things in the conclusions he draws from this study.

First, finding a sex difference (female advantage) in emotionrecognition at age six needs



some explanation, and is in line with the empathisingsystemising (E-S) theory of sex differences as proposed in my book *The Essential Difference*.

Second, there are many studies showing that this female advantage in emotion recognition does persist and is found at older ages, including adulthood. Just because Skuse didn't find it in his study doesn't mean it doesn't exist.

It could equally well reflect the test he used. For example, if he used the same stimuli for six-year-olds and for late adolescents, then there may well have been ceiling effects by the later age. Without more information on the test itself, or the results, we cannot rule out that the female advantage in emotion recognition exists across the lifespan.

Typically, sex differences

are only revealed when the test is challenging enough to produce a wide range of scores. Complex emotional expressions (such as embarrassment or envy) would therefore be a better test of this than basic emotional expressions (such as happy or sad). No details of what emotional expressions were tested in Skuse's study were given. Tests obviously have to be age-appropriate, and sensitive enough as instruments for measuring subtle individual differences.

It is of interest that when we were putting together the Mind Reading DVD-ROM of brief video clips of every human emotional expression as enacted by actors – and there are 412 distinct emotional expressions (www.jkp.com/mindreading) –

we had to audition 10 times as many male actors as female to find actors who were able to produce convincing complex emotional expressions. So the sex difference may extend to communicating emotions as well as recognising these.

Third, memory for faces or detecting eye contact may not entail any empathising, just good memory or being able to compute the geometry of gaze direction. So the E-S theory would not necessarily predict any sex difference on these aspects of face perception.

All this is not to criticise Skuse's study, which sounds worthwhile and interesting, but to caution what conclusions can be drawn from it. Simon Baron-Cohen Autism Research Centre Cambridge University