

Equality: could we incubate it?

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Part One: Gender - Fact: girls outperform boys. We may never agree on whether this is down to nature or nurture, but isn't it time we found some classroom solutions, asks Adi Bloom?

There is one point on which everyone agrees: it all starts in the womb. On everything else, opinion is divided as to why boys and girls perform differently in school.

There are the evolutionary biologists, who claim that gender difference is innate. It is genetic and hormonal, established before a child is even born. To them, boys are natural risk-takers, who prefer hands-on activities to hard work, while girls are naturally obedient, applying themselves diligently, if unadventurously, to any given task.

And then there are the social scientists, who insist that gender difference is a social construct. Like the evolutionary biologists, they believe that the pattern may be established before birth. But for them, this is societal: one need look no further than the mothers-to-be who talk to their girl bump one way and their boy bump another way.

The issue of boys' inability to match girls' academic performance is an emotive one. Newspapers talk of "victims" and "lost boys". Debates on the subject can too easily descend into mutual recrimination, one side speaking of the "feminisation of the curriculum", while the other insists this is only a problem if one assumes that boys should be the higher performers.

But the facts are less one-sided than the headlines indicate. In the 2007 key stage 3 tests, for instance, not much separated the sexes in maths and science. More boys than girls reached level 4 in science (78 per cent, compared with 76 per cent), while there was barely any difference in the maths results (87 per cent of boys reached level 4, compared with 88 per cent of girls).

This trend persists into secondary school: the proportion of boys and girls reaching level 5 at key stage 3 was almost identical - there was only a one per cent difference in both science and maths.

But in English, the difference is marked. At key stage 3, the proportion of girls reaching level 5 was 80 per cent; only 67 per cent of boys reached it. And at key stage 2, 85 per cent of girls reached level 4, compared to 76 per cent of boys.

Many attribute this to fundamental differences between the sexes. Susan Pinker, psychologist and author of *The Sexual Paradox*, points out that boys are much more likely to have attention-deficit or verbal disorders than girls.

Evolutionary theory suggests that women's prehistoric responsibility for organising childcare among groups has led females to evolve with better verbal skills. Neurologists have found that the male hormone testosterone has an adverse impact on language skills.

"You see the impact of testosterone in shaping neurological architecture," Dr Pinker says. "The higher the level of testosterone excreted during the second trimester of pregnancy, for boys and girls, the less social the child will be, the less they will make eye contact and the more slowly language develops."

This biological advantage is then compounded by experience. Sue Palmer, a literacy consultant whose book *21st-Century Boys* will be published next year, believes that school exacerbates innate strengths and weaknesses.

"In general, boys need a firmer hand and more consideration of their needs and interests than girls," she says. "Girls are not good risk-takers, but they tend to be more suited to the school environment."

As a result, the gap between boys' and girls' achievement broadens consistently throughout their education. In the days of the 11-plus, grammar school heads had to reject high-achieving girls to maintain a male-female balance. Many prestigious US universities, which only admitted women late last century, now have a 40:60 male-female divide. At GCSE, the difference between the numbers of boys and girls scoring five good grades can be as large as 10 percentage points.

"You tend to do the things you're good at because it gives you rewards," says Dr Pinker. "And whatever you're learning from your practice builds up your neural networks. Environment works together with predisposition."

Others, however, argue that the differences in boys' and girls' achievement is all nurture: inherent nature plays no role at all.

The roots of this argument go back to the first public exams, established by the Royal College of Preceptors in 1849. In 1851, 35 boys and 40 girls were examined in the standard curriculum - English, scripture, modern languages and Euclid. And the girls outperformed the boys. Commenting on the results, the dean of the college said: "The ladies have done themselves more credit than the gentlemen."

But girls' achievement was not seen as threatening so long as male and female roles were clearly defined. Jacob Middleton, a historian at Birkbeck College, London, says: "The Victorians subscribed to separate spheres. Intellectual equality was seen as quite commendable - a wife should be able to keep up with her husband's intellect."

And there were certain subjects in which it was permissible for girls to excel: English, French, music and drawing. "These were natural things for the female sphere," says Mr Middleton. "Very few girls even considered the idea of science or maths. Reading novels or making music was seen as quite feminine." In fact, girls were also outperforming boys in studies of Euclid, but this was ignored as an anomaly.

The strict strata of Victorian society have collapsed, but the divide between the spheres remains. Becky Francis, professor of education at Roehampton University, argues that literacy and language are still seen as the female preserve.

"Social constructions of curriculum subjects as gendered have been with us a long time," she says. "Boys don't see communication, interest in poetry and novels or emotionality as appropriate for their masculinity. Especially at primary level, diligence, care and application to writing don't sit comfortably with the construction of masculinity." The gender divide, she insists, is not innate; it is a social construct. Reading is an acceptable pastime for girls, while boys see a love of language as effeminate. "Whether or not you believe in essentialist predisposition, these trends come into play very, very early in babyhood," she says.

Like Dr Pinker, Professor Francis believes that this becomes ingrained over time: boys who are given Lego sets become comfortable with the mental processes that this kind of toy involves. As a result, more boys than girls are entered for science GCSEs every year.

After significant campaigns to promote scientific careers for women, girls have begun to catch up in "masculine" subjects such as science and maths. But boys have yet to catch up in literacy.

"That's what has created the idea of boys' underachievement," Professor Francis says. "But in terms of enjoyment of science or careers in science, girls are still very, very under-represented."

She suggests that the best solution is for teachers to challenge established gender stereotypes from nursery school onwards, making children aware of gender expectations so they can actively choose to flout them. She cites a study in which pre-school pupils were read feminist fairy tales about resourceful princesses. "Children found them discomfiting," she says. "You've got to alert them to gender expectations before they can enjoy those kinds of stories."

In fact, the proponents of innate difference advise similar tactics. Sue Palmer insists that the role of school is to force pupils to address their weaknesses. "Teachers need to encourage girls to take risks," she says. "Then girls would feel more resilient and able to hold their own. And men need people skills, so we need to make sure education compensates for any difficulties.

Ultimately, she believes society should embrace these differences, rather than ignoring them.

"For years, women have tried to be like men," she says. "But we have many strengths, such as understanding of human nature, that we've failed to make the most of. Often, we're not able to use our strengths as well as we might because the system overtakes us. But the system was designed by men."

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THE SOCIOLOGY OF THE 21ST-CENTURY CLASSROOM

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