CHAPTER 13
Sex and Gender

Strictly speaking, gender is a grammatical term and its use should be restricted to grammatical contexts. Feminists have, however, popularised its use to mean the difference between being male and being female - largely as a means of emphasising their contention that this difference has little to do with biology and much to do with culture. The degree to which this is true is something that takes some untangling but the true picture is becoming clearer.

The first clear fact is that there are biological sex differences which predispose males and females to some behavioural differences. Circulation of androgens in the womb increases the amount of aggressive behaviour and gross physical activity in males. Boy babies are more restless than girls. Boys in play groups and nursery schools initiate about twice as many aggressive acts as girls and their aggressive encounters are more prolonged. Girls of this age tend to be more nurturant and protective than boys. Now and later, boys play more outside, are more physically active and play less with dolls.

At birth, males are heavier and longer than females. However, they do not attain the bone age of the new-born girl until they are four to six weeks old. From the second month on, their calorie intake is higher and they have a consistently higher basal metabolism and greater vital capacity. For all this, they lag females by about two and a half years in attaining puberty and are more prone to a variety of diseases (on the other hand, females have higher mortality than males for a number of diseases; the difference seems related to the different action of male and female sex hormones on elements of the immune system).

Caregivers do respond differently to girls and boys but their response is to the child's behaviour, not its sex. In the early months of life, boys tend to be handled more than girls but girls are spoken to and smiled at more during feeding sessions. Does this carry on through childhood, when boys are given more toy vehicles, more educational materials and more sports equipment while girls are given more dolls? Or is this a case of insidious socialisation? The same could be asked of the fact that parents tend to allow boys of school age greater freedom to roam the local neighbourhood and are more likely to encourage girls to stay at home. And why are parents much more willing to tolerate tomboyish behaviour in a girl than 'cissy' behaviour in a boy?

Certainly books and television tend to present a very one-sided view. Most children's books are about boys, men and male animals. Boys are portrayed as active and adventuresome; girls, when they appear, are passive and immobile. Again, on television, males are shown as being aggressive, constructive and helpful, while females are deferential and passive.

There are differences between male and female in brain organisation, dating back to the time of secretion of androgenic hormones by the foetal testis. There is some (mixed) evidence that testosterone retards development of the left hemisphere of the brain, which may cause boys to have inferior verbal abilities but superior spatial abilities, and make them more prone to stuttering and reading disabilities.

During childhood, the right hemisphere of the brain of boys becomes specialised for visuospatial abilities, while the left hemisphere becomes specialised for language skills. On the other hand, girls show much less specialisation. While it is not established beyond doubt that these patterns relate to sex differences in intellectual ability, the evidence is highly suggestive. Thus, boys tend to have greater facility in understanding concepts of orientation and perceptual configuration and do better in tests of spatial ability. Visuospatial ability is also correlated with mathematical ability and boys usually score better than girls, though phrasing problems in terms of 'female' objects reduces the difference. Girls, on the other hand, tend to do better in reading and language, though it has been suggested that at least part of this difference is due to the greater restlessness of boys. While it will take some time yet to conclusively establish how much of the differences in performance of boys and girls is due to biological sex and how much due to culture

and the structure of education, the picture seems to be emerging that there are very real differences which should be taken into account when designing courses; i.e., there is a strong case for tailoring education differently for boys and girls (while, hopefully, also being able to maintain at least some interaction so that both can appreciate that there may be more than one way to solve a problem and both ways may be equally valid).

Given all this, it seems certain that cultural differences do act to persuade children to conform to sex-sterotyped expectations. For instance, there is evidence that the reluctance of girls to study science is less due to their lack of ability than to the fact that they see science as 'masculine' and, therefore, inappropriate to them. But is this truly cultural or is it an expression of biology? Many women are repelled by the impersonal, objective, narrowly disciplinary stance of traditional science and prefer to view the world from a broader, more interdisciplinary, more intimate perspective. They tend to be drawn more often to topics that are complex and entertain ambiguity than to models that can only be classified as right or wrong. Accordingly, females who baulk at physics or chemistry often feel right at home with biology. There is evidence to suggest that a more holistic approach to teaching science would attract more girls. And science could well benefit from the more holistic approach women might bring to it; there are many problems in science (especially biology and medicine) where it is impossible to treat interacting factors one at a time, as in the standard approach. Then again, it may be that women are being realistic in avoiding science as a career. The history of women in science is brimming with tales of discrimination and of contributions lost or misunderstood simply because they were made by women. However, males and females tend to do equally well in biology, which may point back to the reality of the 'female' approach being more valuable in this field.

Science is not the only field in which there is a tendency to prejudge a woman's potential and performance; it applies equally to business, where men are consistently overrated and women consistently underrated. This appears to be a clear reflection of cultural biases.

With increasing evidence of the plasticity of the brain during development, it must be asked whether the differences observed are not in fact caused by the different way in which boys and girls are treated in childhood. Thus, the observed difference in specialisation of the hemispheres could be produced by the fact that boys are given more freedom and encouragement to engage in outdoor spatial pursuits, while girls are kept indoors and engage in more verbal pursuits.

A series of recent books - notably John Gray's bestseller, *Men Are From Mars, Women From Venus,* and Deborah Blum's *Sex on the Brain* - point out several differences between men and women that cannot be said to have been scientifically established but do match common lore and 'folk wisdom'. These include that men can't find things in the refrigerator while women can't read maps; that men are more direct but women more open; that men try harder to be impressive while women know they're not the centre of the universe; that men find it easier to follow their own path; that men can more easily let little conflicts go while women are better dealing with the big stuff; that men are more accepting of themselves; that women are better at listening; that women look after themselves better. Of course, we all know that women are much better at shopping, which is why about two-thirds of wives do all the grocery shopping. Whether these differences, and many others given, are real and, if so, how much is due to the X and Y chromosomes, how much to sex hormones and other biological factors, and how much to culture is something that awaits much more detailed examination.

Whatever the exact contributions of biology and culture to sex differences, we can enrich our lives and our relationships by respecting such differences and not seeing them as signs of inherent superiority or inferiority, and by not being too rigidly constrained by sex stereotypes. A man who can sometimes be cuddly, passive, even seductive, or a woman who can sometimes take the lead in lovemaking will be a better, more complete lover. So will a man who can learn how to be intimate and personal. Taking an interest in each other's activities will not only enhance the relationship but may provide some pleasant surprises.