## Deadly as the male

Mating strategies to suicide bombing: which is the better sex and which more likely to want to know?

"here is a birth defect that is surprisingly common, due to a change in a key pair of chromosomes", writes Melvin Konner in an early passage that sets the tone for his new book.

In the normal condition the two look the same, but in this disorder one is shrunken beyond recognition. The result is shortened life span, higher mortality at all ages, an inability to reproduce, premature hair loss, hyperactivity, conduct disorder, hypersexuality, and an enormous excess of both outward and self-directed aggression. The main physiological mechanism is androgen poisoning, though there may be others. I call it the X-chromosome deficiency syndrome, and a stunning 49 percent of the human

species is affected. It is also called maleness. There, in a single paragraph, you have what is best and worst about Konner's book: it is witty, well paced, packed with useful information and suggests an intriguing new perspective on an old phenomenon, yet it also, subtly and not so subtly, distorts the science to make an easy point.

Konner has two distinct stories to tell, and the one that occupies most of his pages is well told: it concerns what we now know about how biology shapes the difference between males and females, in many non-human species as well as in our own. It is no longer tenable (and has not been for some time) to think that biology determines only the anatomy of malefemale differences while culture determines all the differences in behaviour. Human behaviour is massively variable and responsive to cultural influences, and virtually all observed types of behavioural trait have been found in at least some men and in at least some women. But there are still some traits, good and bad, that are more characteristic of men than of women, and vice versa.

Some such differences in traits (such as the greater male predisposition to violence) are present across most or all cultures, even when the magnitude of the difference is responsive to particular environmental and cultural circumstances. Some (such as a greater male preference for competitive environments and a tendency to perform better under the stimulus of competition) appear to hold in some contexts but not in others, yet are rarely found in reverse. For some, too, we know a little about the correlation of the trait with some physiological characteristics, such as testosterone levels. For others (such as the greater tendency of women's scores on various tests of competence to be affected by what is called "stereotype threat" - a sensitivity of performance to cues about what is considered normal or expected for their gender), we still have frankly no idea.

This is fascinating stuff, about which we are learning a lot more every year, and Konner lays it out with a fine blend of science and anecdote and a virtuoso mastery of detail (reading this reformed former cultural determinist is at

## PAUL SEABRIGHT

Melvin Konner

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moments like hearing someone say "I'm enjoying this party all the more because I used to be a nun"). He begins with the underlying biology, and in particular the difference in size between large, scarce female eggs and tiny, abundant male sperm that marks almost all sexual reproduction. This leads usually to a further asymmetry in other forms of parental investment, such as feeding and physical protection. Females usually invest more than males (though with important exceptions, to which Konner is excellent at drawing attention).

This in turn leads to a different kind of competition among males for access to these females than that among females for access to the males. Males are usually more persistent in their endeavours, and females more selective in response to male persistence. Males are usually more interested in the quantity of mating opportunities and females more interested in their quality. Each sex depends for its fitness on the ability to overcome the bottleneck created by the availability of the other, but the bottlenecks are different, and only exceptionally should we expect to see similar mating strategies evolve in the two sexes of any species.

These points are well known to biologists, but one of the fundamental insights of sexual selection (one congenial, of course, to Freudian psychoanalysis) is just how many apparently diverse behavioural traits are in effect mating strategies, directly or indirectly. This is no less true in our own species than in others, and that awareness creates endless opportunities for both science and speculation. One of the entrepreneurs quoted by Konner puts it bluntly: "Fundamentally, what drives most human behavior is basically foreplay". The remark is revealing, though, less for what it says than for what it leaves out, namely afterplay. Human beings are a species whose social life is shaped uniquely in the animal kingdom



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Three tired men, three matching ties, three very different tasks for the day when Britons marked the seventieth anniversary of the end of the Second World War in Europe. The British election produced no memorable image until a few hours after it was over. From left to right, in every sense, Ed Miliband, Nick Clegg and David Cameron stood together at the Cenotaph, an invitation to party leaders that cannot be passed up for lack of sleep, or hopes of power, or job. On the night before, the Labour leader had expected to be Prime Minister for VE Day, the Liberal Democrat to be holding the balance of power, the Conservative to be scrabbling for new coalition allies at best. All looked suitably solemn but one had just the hint of satisfaction on his lips. by the massive investments we make in raising children. So much of our behaviour is about coping with the consequences of mating rather than just about making mating more likely to happen. It is probably a characteristically male trait to forget that.

The second story that Konner, unfortunately, wants to tell is the sensationalist one: it is not just that men and women have behaved in different ways but that these differences make women the superior sex. There seem to be three distinct components to this claim. The first is that, as he puts it: "the mammalian body plan is basically female unless the Y [chromosome] flips it into maleness". Here Konner repeats what used to be received wisdom among geneticists a couple of decades ago, especially after the discovery in 1990 of a gene called SRY which appeared to orchestrate the various changes, including hormonal ones, that turned an otherwise female body plan into a male one. The trouble with repeating the story now is not just that it is inaccurate, because even if it were accurate it is unclear why the default plan for gender development (which is all about temporal priority in the process) should have anything to do with female superiority. But inaccurate it is. As Claire Ainsworth wrote in Nature (February 18):

By the turn of the millennium, however, the idea of femaleness being a passive default option had been toppled by the discovery of genes that actively promote ovarian development and suppress the testicular programme . . . . These discoveries have pointed to a complex process of sex determination, in which the identity of the gonad emerges from a contest between two opposing networks of gene activity.

The second component to Konner's claim is the oddest, and also the one that seems to concede most to the muddled thinking behind former claims of male superiority. We can agree that some positive behavioural traits are more common among men than women and that others are more common among women than men – the word "positive" here means either that they are beneficial to their bearers or that they contribute to the good of society and are therefore admirable or to be encouraged. Konner wants to go further than this, and claim that the overall balance of positivity clearly favours women; women are superior "overall". But he offers no basis for judging how to weigh these different traits against each other.

This is reminiscent of arguments that men have on average superior intelligence to women. Tests that purport to measure intelligence rigorously have a number of components measuring different mental competences, on some of which (such as verbal comprehension) women tend to perform better than men while on others (such as various spatial rotation tasks) men perform on average better than women. Any aggregate measure that claims to



Barbara Kruger's "Untitled (We Don't Need Another Hero)" (1987) and David Moffett's "He Kills Me" (1987), Whitney Museum of American Art, New York, 2015

measure overall or general intelligence will therefore depend on two things: which component tests are included in the package, and what weight is given to the different components in constructing the overall measure.

In the current state of psychological research, there is no coherent theory justifying either which components to include in an overall test of intelligence, or how to weigh them against each other in reaching an aggregate judgement. The nearest thing to a coherent weighting scheme is based on a technique called principal-components analysis – or its close relative, factor analysis - which chooses weights based on the correlation of the components. But there is no reason to think that this correlation adequately represents the objective importance of the factors, and in any case the correlation in turn will depend on the possibly arbitrary choices of component measures to include. Any study that claims to have found conclusive evidence that men are more intelligent than women overall (and there have been quite a few) can only have done so by imposing an essentially arbitrary inclusion criterion or weighting scheme. And the same would be true of any study that claimed to have found evidence for the greater average intelligence of women than men (there have been fewer of these). Note that this would no longer be true if one gender outperformed the other on *all* of the component tests of competence that might reasonably be included, since then the aggregate would favour that gender regardless of the weighting scheme used. But superior performance in all dimensions is definitely not characteristic of either gender, and it is decades since anyone has seriously claimed it was.

What Konner has done in his book is merely to use the same arbitrary technique applied to more general traits than intelligence. The results are sometimes comic: men perform better than women in sports demanding speed and muscle, he tells us, while women perform better than men in sports such as "longdistance swimming and other endurance challenges". Why the latter are supposed to contribute more to "overall superiority" he does not say - why there should even be such a concept as overall superiority in sports is something it does not occur to him to ask. In a similar vein, he dismisses (rightly) the idea that the greater number of male than female Nobel prizes means that men are superior to women, but immediately cites the Nobel prizes won by women as though they are of higher quality than those of men, because harder to win, and therefore constitute evidence in favour of the superiority of women. The argument is conceivable, but it would need careful evidence; and we are offered none, careful or otherwise.

y this point in the book, the anecdotes are no longer being used to illustrate the argument – they have become the argument. From then on, lists of the virtues of women and the vices of men pile up thick and fast (sometimes with a curious insensitivity to incongruity, as when the consensual adulterous relations of male politicians are listed alongside child abuse as though the two were on a par), and clearly advocacy has replaced sober assessment. It is frustrating to see serious science being put to the service of such a specious and unnecessary exercise – why should anyone think it makes sense to ask which is the superior gender? It is also frustrating because there is a third component to Konner's argument where a related question does make sense, and it deserves a more careful and less anecdotal treatment than is given here. This is the question whether a greater future representation of women in positions of political and economic power is likely to lead to the emergence of more consensual and less confrontational behaviour, and to less violence, at the level of society as a whole.

This is a plausible and indeed an attractive claim that has been advocated by Steven

Pinker among others, but aside from one or two very special studies (such as comparisons of the leadership styles of male and female city mayors) there is almost no relevant empirical evidence. This is for three main reasons. First, even if we just consider the behaviour of individuals in power, the individuals who currently hold power are not necessarily typical of those who would hold power if more women were represented. Second, the behaviour of given individuals is likely to change as social arrangements evolve. Konner talks repeatedly of how factors that currently hold women back in society (such as lower assertiveness than men) can be changed to enable women to progress, but he appears to believe that the good qualities he sees in women will remain unchanged once more of them hold power. More assertiveness by women to obtain power, but no more assertiveness by them in the exercise of power once they have attained it? It's possible, but it would be good to see more awareness by Konner of just how hard it is to draw conclusions based on the evidence we have.

The third reason, and perhaps the most crucial, for doubting the relevance of such evidence as we have, is that the overall levels of violence in society are determined not just by the actions of society's leaders but by members of society at all levels. As is by now becoming painfully apparent, some of the most shocking kinds of violence, such as those currently disfiguring the Middle East, are inflicted by marginalized and frustrated men. Increasing the proportion of women in power will do nothing to reduce this violence and may even increase it if the opportunities open to men decline.

The case of violence shows just how hard it is to make judgements about whether men or women are the superior sex. There is no doubt that men are more violent than women, but not in all contexts: suicide bombing, for instance, is a technique in which women terrorists (beginning among the Tamil Tigers in Sri Lanka) have played and continue to play a leading role. Furthermore, many men engage in violence in order to win the admiration of women, and only the naive would believe that women do nothing to encourage or reward them for this. In short, violence emerges from the interplay between men and women – it may be a predominantly male trait but it flourishes in contexts that are profoundly influenced by the presence and actions of women. Managing violence therefore requires influencing the behaviour of both men and women – in ways that are far more subtle than just replacing men with women in positions of power.

The ability to face up (as the behavioural sciences for a long time in the twentieth century refused to do) to the systematic differences in behaviour between men and women creates an opportunity to think hard about how to use the complementary competences of men and women to broader social ends. There is no doubting the urgency of this – some of the most pressing social challenges, such as violence, are gendered to the core. Why, though, Melvin Konner should think these ends will be advanced by making judgements about the overall superiority of women to men is a mystery.

We are entirely capable of comparing both individuals and groups of people along a range of dimensions without insisting that we compare them "overall". True, some contexts demand a final judgement of overall merit such as choosing between candidates for a job. But in other contexts (discussing our children, say) it is a foolish thing to do. Let's agree that there are many ways in which the behaviour of men and women differs, on average. I don't know what is the origin of the impulse to add 'but which of the two is really the best?" But I'm prepared to bet, if scientists ever study the question rigorously, that we shall find that the insistence on asking such a question is a predominantly masculine trait.