



Review of *Testosterone Rex* by Cordelia Fine

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REVIEW

Cordelia Fine sets out to bust myths galore in her appealing and accessible latest work, *Testosterone Rex*. Returning to the theme of her earlier book, *Delusions of Gender*, in which she addressed the scientific basis of claims around differences between the sexes, she examines in detail the behavioural patterns that are regularly dismissed as testosterone-fuelled endeavours. Repeatedly, and with ease, she presents studies showing a more complex reality that contests the simplistic rationalizations of stereotypical behaviours readily accepted within our society. Deftly, she lays to rest the common misconception that such stereotypically male behaviour can be blamed on, or excused by, the hormone symbolic of the sex: testosterone.

In the first part of the book, Fine reviews the studies that have led to our view of promiscuity as being more evolutionarily rewarding for males than for females, and the knock-on behavioural effects resulting from this evolutionary trait. There follows a robust critical review of the original work on this topic, which took fruit flies as its subject, revealing subsequent—and futile—attempts to reproduce the original findings. Fine demonstrates how the story might be more complicated than originally thought, with significant variations in behaviour observed between species. It becomes clear that female promiscuity is also abundant in many species, with a similar link to reproductive success.

However, there remains the pervasive view that a man's ability to create many more children within any given timeframe than a woman can, will influence his behaviour. Fine evaluates the odds of success of promiscuity versus monogamy,



and then considers the prevalence of monogamous relationships across human societies throughout history. The evidence supports the assertion that there is no universal link between hormonal and genetic drivers, and societal behaviour concerning partner selection. Rather, a wide diversity of roles in pairing and parenting is manifest both within, and between, species.

The narrative continues to reveal that, not only does our traditional "Testosterone Rex" view oversimplify the situation with regard to pairing, it also oversimplifies the connection between sexuality and reproductive sex. The role of non-reproductive sex is explored, as well as the effect of the change in economic independence of women in Western societies over the last century, supporting the view that the sexual preferences and behaviours of both genders respond to their prevailing environmental and social conditions. Given this intrinsic connection with the culture in which individuals are embedded, Fine asserts that we are erroneous in our attempts to move beyond these factors in our attempts to isolate "natural" sexual behaviour.

The next part of the book moves away from anthropological considerations, examining psychological differences between the sexes: Is a difference in psychology an inevitable result from physiological difference? Do "male brains" and "female brains" exist? The evidence is much more nuanced than this binary, classical view suggests. Environmental and epigenetic processes interact with factors associated with genetics and hormones, including the infamous testosterone, to produce remarkably small and fluid sex differences across a wide range of skills, which together form a mosaic rather than two clearly distinguishable psyches. Risk-taking might be seen as the epitome of a masculine characteristic, but here again Fine skillfully details the diversity in human risk-taking behaviour, presenting the growing body of evidence that suggests sex differences are far from distinct and show a clear link to social context rather than simply to biology—a link that is also demonstrated if competitiveness is considered.

Proceeding, we turn from the psychological to the physiological and look at the role of testosterone itself in social hierarchies across a number of species, including some wonderful examples, such as the territorial cichlid fish, and an exploration of cause and effect between the status of the dominant male and testosterone production. The cichlids remain with us as we take a tour through hormone production and interaction in a whole range of settings. Just as for the fish, we see how testosterone levels in human males are intertwined in a complex interaction with the cultural environment. As culture comes to the fore, the final example we consider is the idiosyncratic world of the trading floor and sex differences in financial risk-taking. Here the themes of the previous chapters are drawn together, including some entertaining speculation as to whether the Lehman Sisters would have suffered the same fate as their male siblings.

As Fine presents plenty of evidence that those effects we often attribute to testosterone are likely to also have a cultural contribution, it is no surprise that her final chapter begins by addressing the "pink aisle" of toys as we look at how children develop their awareness of gender clues, and how the resultant gender stereotypes can come to dictate adult roles in society.

Concluding, *Testosterone Rex* is an engaging and eye-opening monograph that presents a wealth of scientific studies to debunk popular myths surrounding gendered behaviour. Cordelia Fine presents these perspectives with the flowing narrative of a popular read, making this book easily accessible to anyone seeking to understand the origins of some of our most common gender stereotypes.