

Review - S. Bateman, J. Gayon, S. Allouche, J. Goffette and M. Marzano (eds) *Inquiring into Human Enhancement: Interdisciplinary and International Perspectives*. Basingstoke: Palgrave-Macmillan. 2015. 296pp; ISBN 978-1-1375-3006-6

This edited collection from Bateman et al. is a welcome and valuable addition to the growing literature on human enhancement. The book will be of interest to readers familiar with the field as well as those new to the enhancement debate. Although it is primarily written for an academic audience, it will also appeal to the lay reader and, indeed, to anyone wishing to learn about the societal impact of recent advances in biomedical science.

The 12 chapters in this book offer a diversity of perspectives on enhancement, with contributions from philosophy, ethics, politics, psychology, history, literature, cultural studies, and sociology. This review and synthesis of diverse contributions, and this interdisciplinary approach, are among the major strengths of the book. However, in order to achieve this breadth of coverage and diversity of approaches, there seems to have been some compromise in the depth of discussion given to the individual issues. Nonetheless, from start to finish, the book covers the origins and history of the debate on enhancement. This is intricately linked to wider theoretical and sociological debates about the use, overuse or abuse of technology, its benefits and potential harms, and its impact on health and society as well as on intra-familial and intersubjective relations. Hence, as intended, the book makes a welcome contribution to the sociology of health and illness, the sociology of science and technology, and scholars debating the ethical, legal, and social aspects of the biosciences and biotechnology.

Throughout the book, the notion of enhancement is conceptualised in different ways. In the chapter by Winance et al., the authors adopt a more conventional approach to enhancement, defining it as any device or technology that enables a person to do more or achieve a state of health and wellbeing that is not possible without the technology. A wheelchair, for example, is an enhancement to a person who is unable to walk. Similarly, a cochlear implant is an enhancement for a person with a hearing impairment, and a prosthetic limb is an enhancement for an amputee. In contrast, some authors take a more radical, futuristic, and transcendental approach to enhancement, considering unprecedented physical, cognitive and aesthetic mood and moral enhancements, such as performance-enhancing, life-extending, mood-enhancing, and health-promoting techniques. Chapter 11 by Missa, for example, explores a future of pharmacologically and genetically enhanced elite athletes. The idea of human enhancement is traced to the past and projected into the future. It is linked to the Enlightenment, the scientific revolution and the origins of progress as well as to the pursuit of perfection, the quest for immortality, and the quest for happiness. This reminds the reader that the pursuit of enhancement (interlinked with the pursuit of happiness and immortality) is not a new aspiration but, rather, is as old as humanity.

Much of the book is visionary, in that it offers some insights into a future 'postmodern' or 'post-human' society, that is, a society populated by super-humans with trans-human capabilities. This follows the work of science fiction writers and, indeed, the final chapters

by Dupeyron-Lafayand and Stableford add something unique to the debate by combining the practical world of laboratory bioscience with the imaginary world of science fiction. Through this merging of the arts and science, the reader comes to appreciate that although science enables physical, emotional, and cognitive enhancement, the inspiration behind this science is embedded in some of the classic works of fiction. Huxley's *Brave New World*, Stevenson's *Dr Jekyll and Mr Hyde*, Shelley's *Frankenstein* and Crichton's *Jurassic Park* are just some examples of the literary works that have inspired (or been inspired by) advances in modern bioscience, according to the authors.

Overall, the book is well-balanced, celebrating the achievements of modern bioscience but, at the same time, offering a caution about the perils of the technological imperative in a technological society. In such claims, there are certainly echoes of German critical theorists such as Horkheimer, Adorno, Marcuse and Habermas, and in particular their critique of modernity, the Enlightenment, instrumental rationality, the loss of nature, and threats to human nature. When all of the chapters are taken together, the book is seen as a mix of utopian and dystopian futures, of caution and celebration, of optimism and pessimism. The perils and possibilities of human enhancement are among the most exciting ethical, legal, and social debates to emerge in recent decades, with technology having the potential to transform human identity, human society, and social relations in profound ways. Some of these effects have been identified and discussed outside of this book, but some remain hidden as products of the unanticipated and unforeseen future risks of Ulrich Beck's *Risk Society*.

In sum, the book succeeds in raising huge questions for debate and reflection. It does not provide all of the answers, and it makes no claim to do so. Rather, its purpose is to raise complex and controversial questions. In doing so, it is of interest to natural scientists, social scientists and inquisitive philosophers, for the old and young, for conservatives and visionaries, and for anyone who enjoys debating the big questions about the future of human evolution, the essence of human nature, and new biotechnological approaches to enhancing human health and preventing human illness.