Book Review


Michael Gilding is a Director of the Australian Centre for Emerging Technologies and Society at Swinburne University of Technology

At an early stage of this book, Nicholas Agar tells the story of the Doogie Mouse. The Doogie Mouse takes its name from Doogie Houser M.D, the US TV show about a child genius who becomes a medical specialist. It is a ‘genius mouse’, with enhanced memory through the insertion of an additional NR2B gene into the mouse genome. Mouse populations apparently contained no individuals with the extra gene before the experiment. The experiment raises the possibility of providing humans with the additional genes in order to enhance memory and improve capacity for learning. Yet experiments with the Doogie Mouse also suggest the risks of such a procedure. When Doogie mice were injected with a noxious substance into the hind paws, they licked and bit the affected paws long after the control mice had stopped. Perhaps Doogie mice remember pain because an extra NR2B gene makes it more intense. Perhaps it just makes the memory of pain more intense. Whatever the case, the extra memory comes at a cost.

Nicholas Agar’s book Liberal Eugenics: In Defence of Human Enhancement is full of stories such as this one. The stories are well chosen, designed to highlight the problems and dilemmas of human enhancement through genetic engineering. As the title of the book makes clear, Agar takes a liberal position on this issue. He is against genetic determinism of both the optimistic and pessimistic varieties. More generally, he is against the transhumanists’ uncritical celebration of genetic engineering, and the conservatives’ line-in-the-sand opposition. He takes what he describes as a ‘location between these extremes’ (p. 19), one of ‘pragmatic optimism’ (p. 20). This involves engagement with the technology, taking advantage of its benefits but remaining critical of its risks.

Agar goes about his business using ‘the method of moral images’. The method involves addressing an unfamiliar practice – such as genetic enhancement – through the analysis of another practice chosen both for its similarity to the problematic practice and the fact that it elicits moral reactions of which we are confident’ (p. 39). The opponents of biotechnology favour moral images that prompt negative evaluations – for example, those of Nazi eugenics. Agar’s images, on the other hand, ‘expose some of the dangers of enhancement’, but ‘support a more favourable evaluation’ (p. 39).

The core of the book addresses three moral images. The first is THERAPY (I follow Agar’s practice here of placing his moral images in capitals). Conservatives in the United States have resisted this moral image, insisting for example that harvesting stem cells is better understood in terms of ‘research’ than ‘therapy’. Agar concedes that ‘EXPERIMENTAL THERAPY is a more precise moral image for early twenty-first-century gene therapy than plain THERAPY’ (p.66). He also observes that the moral image of THERAPY ‘supports obligations rather than permissions’; that is, it supports the idea that parents should be obliged to enhance their children in one way or another, just as they are obliged to provide therapy when it is required. Agar is not happy with this notion, not least because it removes the distinction between obligatory Nazi eugenics and a liberal eugenics grounded in choice. The challenge for liberal eugenics, he argues, will be to restrict the scope of therapy. To this end, he advocates ‘that we strictly limit THERAPY’S scope to the prevention or treatment of disease’ (p. 87).
The second moral image is that of NATURE. This image is the favourite of the opponents of biotechnology. Francis Fukuyama, for example, called for government regulation of biotechnology on the grounds that it would remove the natural equality between humans. Agar appropriates the moral image of NATURE to his own ends. He argues that ‘if it is morally acceptable to leave in place a given natural genetic arrangement associated with enhanced ability, then it is morally acceptable to engineer an arrangement with the same effects’ (p. 89). To put it another way, insistence upon ‘the preservation of natural advantages sounds a bit like withholding remedial literacy classes on the grounds that those with a natural aptitude for languages do not require them’ (p. 97). In any case, Agar is confident that there are ‘many good ways for persons to be’, none objectively better than others. This does not imply moral relativism. There are some forms of genetic enhancement that may cause children harm, whether in terms of suffering or the curtailing of life choices. These should not be permitted.

The third moral image is that of NURTURE. This could not serve as a moral image for genetic enhancement if genes and upbringing made fundamentally different contributions to human development. Agar insists that they do not. Rather, he upholds an ‘interactionist model of development’ (p. 112). In turn, he observes: ‘If we are permitted to produce certain traits by modifying our children’s environments, then we are also permitted to produce them by modifying their genomes’ (p. 113). As a corollary, we should regulate genetic modification by the same principles as we regulate the raising of children. This is a difficult task, requiring a balance between the interests of parents ‘in promoting their ideals and children’s need for self-determination’ (p. 123). As a rule of thumb, Agar proposes that an enhancement will have ‘reduced real freedom if it makes unlikely a successful life founded on values that oppose those of its enhancers’ (p. 125).

The last section of the book is more speculative. Here Agar addresses the broader implications of the technology. In particular, he addresses the risks of polarization and homogenisation. The risk of polarization is that inequalities arising from enhancement ‘may make people so different that any sense of solidarity is lost’ (p. 138). Then again, contemporary liberal societies already have ‘genetic underclasses’ (p. 140), that is people suffering from serious genetic illnesses and struggling for access to public health services. It is possible that these people may be the first beneficiaries of genetic enhancement technologies. The risk of homogenisation is that enhancement will give full rein to popular prejudices and a narrow view of desirable human traits. It is possible, for example, that black parents (following the example of Michael Jackson) might choose to have children with white skin, and that they might justify this in terms of ensuring that their children do not suffer from prejudice. Agar argues that this type of modification should not be allowed, because it reinforces prejudice.

The final chapter asks ‘Enhanced Humans When?’ Agar rejects the ‘Precautionary Principle’, observing that the application of the principle would have prevented many powerful discoveries of the past, from fire and the wheel to the polio vaccine and aeroplanes. The real moral issue with the development of enhancement technologies, Agar believes, lies in the experimental lives that must be created for enhancement technologies to occur. For example: ‘Researchers may promise to terminate extra-NR2B embryos developing in an obviously abnormal way, but demonstrating that NR2B therapy enhances human intelligence without imposing some major penalty will require that some embryos be allowed to develop to personhood’ (p. 167). Agar canvases the classic moral dilemmas encountered by students in first year philosophy courses in relation to such experiments. In the end, though, he thinks that the dilemmas will be short circuited by underground experimentation. Here he proposes
Edward Jenner (the inventor of the smallpox vaccine) and the organ transplant pioneers, rather than the Nazi doctors who conducted human experiments in the concentration camps, as the moral counterparts of pioneers in human enhancement.

There are many apocalyptic books about biotechnology. This is not one of them. It is thoughtful, careful and logical. It begins the kind of conversation that is long overdue about biotechnology: not about whether it is a good or bad thing in toto, but rather about how it might be employed for the best, and the kind of regulation that should be employed to these ends. This is a more realistic conversation, more nuanced and ultimately more interesting.