appealing to these kinds of question-begging explanations). So we have done nothing to resolve the initial Empodeclean puzzle: we still lack an explanation of how it is that the experience can connect a perceiver located at one position to an external object situated at a different place. How does the experience reach out to and include the perceptual object? The central difficulty remains.

The second problem is that even if we could explain what it is for an external object to be present in sensory consciousness, and present as a constituent of the experience in something more than the merely formal sense, it is not clear why we should prefer such an account to the more straightforward causal view that many of Aristotle's remarks about the nature of perception in *De Anima* and elsewhere point towards.

For these reasons it is not clear to me that Kalderon succeeds in integrating Aristotle's proto-scientific ideas about the nature of perception with an adequate philosophical analysis of the concept. There is certainly a good deal of interesting analysis presented in this book of Aristotle's ideas about light and colour, and about how they relate to those of his predecessors. Yet it is arguable that much of the discussion of the detailed nature of Aristotle's account of transparency, and of colour, and light and dark, is independent of exactly what is meant by Aristotle's claims about the assimilation of form without matter. Nevertheless, those who are unsympathetic to the causal theory of perception will find plenty to agree with here, and Kalderon has done a useful service to his contemporaries in showing how his writings about perception can be interpreted in a manner that locates Aristotle in the direct realist camp.

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The Biological Foundations of Bioethics
By Tim Lewens
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Tim Lewens' new book *The Biological Foundations of Bioethics* is a collection of essays published between 2002 and 2013, with two chapters (chapters 6 and 11) appearing for the first time in this volume. Although the essays were originally published as articles in a variety of journals in different disciplinary fields, they all share Lewens' commitment to dismantling in a philosophically rigorous

way some long-held distinctions that are thought (often without adequate support) to play a significant role in bioethical issues. These are nature versus nurture, genes versus environment, health versus disease, and treatment versus enhancement, among others.

The book is divided in two parts. The first part (chapters 2–5) discusses human nature, and related issues of enhancement, engineering nature/tinkering with nature. The first chapter engages with Michael Sandel's '*Against perfection*' arguments and identifies some genuine ethical concern in Sandel's now famous case against enhancement, although Lewens argues that the good points raised by Sandel were not really about enhancement, but about some type of '*procrustean parent*ing' (23–24). By salvaging some of the arguments in Sandel's often-maligned essay, Lewens is also implicitly criticising some of the aggressive ways of doing bioethics that makes a straw-man of opponents.

Chapter 3 offers some reflections on some continued 'yuck' attitudes to enhancement, and suggests a more moderate position than complete dismissal as John Harris and other prominent bioethicists have done. Lewens identifies in the detractors of enhancements some good arguments based on the potential disadvantageous cost–benefit ratio, which may support a precautionary, or at least we could say 'moderate', attitude toward enhancement. His strategy in this chapter as in others aims at unpacking the values that go into the construction of what counts as evidentiary threshold for the ethical permissibility of a technology.

Chapter 4 challenges an essentialist notion of human nature. Lewens engages in the discussion of species and natural kinds that fall properly within the field of philosophy of biology. The important message from this chapter is that we should not frame debates around cloning/enhancement in terms of human nature, as this question is either irrelevant (the right question to ask would be '*What is important to preserve of the human nature concept?*'), or it presupposes that 'nature' can serve as an ethical guide, thereby committing a fallacy. Another important message of this chapter is that because we, as human beings, are all intuitively neo-Aristotelians and teleologically oriented, we should be twice as wary of using notions of human nature as guides in ethical and political debates.

Chapter 5 engages with discussions of engineering Nature. Lewens argues that synthetic biology is not, as often argued, the product of 'objectionable impulse to mastery' but should instead be seen as the expression of an awareness of our human limitations. Lewens argues that synthetic biology differs from previous ways of intervening in nature, e.g. breeding, '*not because it blurs the organism/artefact*

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boundary – that has always been blurry – but because of its goal of bringing the organic within the realm of design' (119–121). This chapter is very important as it shifts the ethical attention over other kinds of ethical problems: away from a desire to master evolution/playing God – which is so pervasive of many debates in bioethics – and towards an examination of who shall have control of technology and to what end. While these are not new concerns, as noted by Lewens (*'familiar concerns about how to approach emerging technologies'*, 78), they are very important ones and too often crowded out by a misplaced bioethical emphasis on engineering Nature/hubris/playing God arguments.

Chapter 6 '*Origins, Parents and Non-Identity*' recognises the impact of a proper recognition of developmental biology on classical bioethics arenas such as applications of Parfit's Non-Identity Problem to questions of reproduction. This chapter, together with chapter 7 (technically belonging to the second part of the book as identified by Lewens), '*Development Aid: On Ontogeny and Ethics'*. argues against genetic exceptionalism, and especially against the view that genes are a special, unique type of developmental cause. The aim of the chapter is to include genes in the calculus of distributive justice, on the basis that there isn't a morally relevant distinction between genes and other developmental resources. In this case, as throughout the book, the philosophy of biology question '*What is a gene for a certain trait?*' informs the ethical question '*Should genes be included in the calculus of distributive justice?*'. Consequently, Lewens adopts position that he calls '*exceptionalism by degree'*, which, while highlighting the perils of changing people instead of changing society to equalise opportunity (cf. Robert Sparrow 'A Not So New Eugenics'[1]), still accords a *prima facie* special attention to genes, because of the ease through which genetic technologies enable access to personal information (and, we could add, because the genetic information is familial in a way that other types of information about an individual are not).

The second part of the book (Chapters 7 to 11) discusses the implications for political philosophy of a philosophy of biology informed policy. Chapter 8, which seems to lie a bit outside the trajectory of the book, discusses the relevance of evolutionary psychology for policy making by analyzing two cases: violence on children by stepfathers and rape. Lewens argues that the dispute between evolutionary psychologists and sociologists is becoming too bitter and quite

[1] Robert Sparrow, 'A Not-So-New Eugenics' *Hastings Center Report* **41**, no. 1 (2011): 32–42.

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sterile: both can provide a contribution, but on the proviso that it is generally more effective to implement policy recommendations appealing to different and more proximate drivers of action, such as desire for self-expression/self-realisation or wealth, rather than on putative distal evolutionary adaptations.

Chapter 9 is based on scepticism of the natural/social distinction. Lewens' argument is original while others before (e.g. Lippert-Rasmussen[2]) have argued that the distinction is morally irrelevant, he argues that the distinction cannot be drawn, full stop. The implications of this strong argument are for a revision of the equality of opportunity principle, which needs to be supplemented by a distributive justice principle for fair allocation of developmental resources. Lewens concludes that there may still be ways to alleviate natural inequalities in a social way by means of compensation, and although that might be difficult, we have a collective responsibility to investigate what these ways might be.

The final chapter of the book challenges the health/disease, and treatment/enhancement distinctions. In a similar way to his treatment of distinction above, Lewens' arguments are original as they differ from those of previous authors who argued that the distinction is morally irrelevant; Lewens argues that the distinction cannot be drawn, full stop. The challenge of the chapter is to naturalistic (mainly, Boorse's[3]) accounts of health and disease as a basis for the view that the health/disease distinction can be salient in itself. What remains worth asking when the distinction is shown to crumble is what values are intrinsic and worth preserving in each trait (including deafness and other controversial cases), not whether they fall on one side or the other of the distinction (cf. also chapter 2 in Mills' *Futures of Reproduction*).[4]

The book discusses some very important questions for bioethics and political philosophy. Although it is a collection of essays with only two new ones, it clearly lays out some methodological points that could pave the way for a more systematic critical analysis of bioethical issues. Entailed in such an analysis is a close examination of the scientific and biological assumptions of any bioethical discourse – not accepting at face value the scientific descriptions of the entities

[2] Kasper Lippert-Rasmussen, 'Are some inequalities more unequal than others? Nature, nurture and equality.' *Utilitas* **16** (2) (2004): 193–219.

[3] Christopher Boorse, 'Health as a theoretical concept'. *Philosophy of Science* (1977): 542–573.

[4] Catherine Mills, *Futures of Reproduction: Bioethics and Biopolitics*, **49**. Springer Science & Business Media, 2011 (11–36).

discussed in such discourses, but instead unpacking the values inherent in such descriptions and in language. When common binaries and distinctions in bioethics break down, a whole new space of doing bioethics opens up for creative analysis. One example is the discussion of the ethical significance attributed to the somatic/germ-line distinction. Writes Lewens in reference to attempts by policy-makers and (some) bioethicists to justify mitochondrial DNA replacement therapies on grounds that they are not affecting the human germ-line: '[…] Rather than defend these important therapies by denying, implausibly, that they constitute germ-line interventions, it would be more respectable to argue that they demonstrate the ethical defensibility of at least some interventions to the germ line, even if such a defence demands that we take issue with the Universal Declaration' (6).

This is one of the important messages of *The Biological Foundations of Bioethics*: in a situation where attention to ethical (but not only ethical!) concerns is a scarce resource, we should carefully think where we want to spend it. Lewens politely suggest, we have a responsibility to do so.

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The Ethics of Embryonic Stem Cell Research
by Katrien Devolder
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Katrien Devolder's *The Ethics of Embryonic Stem Cells Research* represents a very interesting contribution to the ongoing debate on the ethical issues of human embryonic stem cells research. Devolder's reflection is beautifully written, avoids jargon without losing precision and clarity and adds valuable material to the debate. The book can be aligned with an important tradition of philosophical reflections within medical ethics, which relies on the formal tools of logic and analytic philosophy to challenge, clarify and refine the consistency and strength of commonly used arguments. This approach to problematic issues in medical ethics includes attempts to reflect on assumptions underlying euthanasia, reproductive technologies and enhancement. In accordance to this tradition, Devolder aims to show the 'serious shortcomings' of the ethical and