

Page provides a thorough theoretical discussion of the ethical foundations of the timing of mitigation action. He starts from the hypothesis that climate change impacts threaten the well-being of members of future generations. As human activities that threaten the well-being of members of future generations are unjust, anthropogenic climate change is seen as unjust. Methodologically, he builds on the principle of reflective equilibrium, i.e. taking into account not only political or ethical theory but also widely held social values and norms. He also stresses that he uses examples that are not based on situations completely removed from human reality.

After a short description of the science of climate change, Page discusses the results of the IPCC assessment reports published to date and supports the precautionary principle underlying these reports. The arguments of the sceptics are seen as having 'serious flaws in the natural science, social science and ethics'. Page then gets into detail regarding the temporal aspects of climate change impacts differentiated according to type of impact.

Chapter 3 of the book embarks on the definitions underlying distributive justice – who gets what and how much? A discussion of consequentialist (i.e. outcome-focused) and procedural (i.e. process-focused) justice follows, before Page embarks on an assessment whether equal welfare can/should be assured over time. Here, the problem arises that adaptation would reduce losses in welfare reductions of future generations due to climate change. Generally, welfare depends on people's preferences, which can change. After dismissing equality of welfare, Page assesses whether equality of resources is a robust principle of justice. After finding that it can be operationalised better than the welfare-based allocation, he assesses Sen's concept of equality of basic capabilities and concludes that a mixed concept equalising 'access to advantage' would be optimal. Unfortunately, the definition of advantage remains blurred.

In chapter 4, distribution according to equality, priority or sufficiency is discussed. The problem to define a sufficiency threshold is assessed at length. Page concludes that 'no broad egalitarian theory can explain all of our distributive intuitions'.

Chapter 5 deals with the problem that future generations cannot influence actions of earlier ones (the non-reciprocity problem). All theories of justice based on the notion of reciprocity face a problem if they relate to the future. However, Page argues that past generations have passed on resources because they wanted to bequeath them to their descendants. Thus we would have to pass on resources to future generations in the same way as we would like to reciprocate an unknown contemporary benefactor. A bit more spurious is the lengthy discussion whether humans can suffer posthumous harm.

Chapter 6 assesses the problem that the composition of future generations changes due to our action and therefore we do not harm any individuals (because they do not come into existence). The extensive debate about this 'non-identity problem' seems rather remote and while Page himself acknowledges its 're-

regionally, nationally and internationally. The chapters collected in these two volumes encapsulate some of the most significant of the Kaspersons' contributions, through theoretical and conceptual developments, to the advancement of risk research. Those readers who enjoy or are interested in Jeanne and Roger Kasperson's work will find that the compendia also act as accessible points to a variety of the authors' publications in the risk research field, some of which would be difficult to obtain otherwise from their original source.

Dedicated proudly to Jeanne's lifelong passion, these two volumes stand as a deserved celebration of Jeanne and Roger's collaborations throughout their distinguished careers. These compendia will certainly be a valuable addition to the libraries of those readers with an interest in high calibre interdisciplinary and groundbreaking risk research.

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Climate Change, Justice and Future Generations

Edward A. Page
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With the recent publication of the Stern review on costs and benefits of climate change mitigation (Stern 2007), the question of responsibilities for that mitigation and the time path of action is getting significant attention. Due to the long-term nature of the climate change issue and particularly due to the long time lags between greenhouse gas emissions and the impacts of increased greenhouse gas concentrations on human society, the question of the timing of greenhouse gas abatement has been central right from the start of the climate policy debate in the early 1990s. While mainstream economists have argued that discounting of damages leads to a result that does not warrant significant investment in mitigation (Tol 2005), representatives of the ecological economics strand use a discount rate that puts much higher weights on damages in the far future and therefore support a more aggressive mitigation policy (Azar 2000, Azar and Sterner 1996). In the political arena, several proposals for long-term climate policy explicitly refer to future generations (the most radical one proposed by Meyer 2000).

Beyond the question about valuing damages, questions of distributive justice of climate policy have been discussed in the climate policy literature for many years (for a seminal contribution see Athanasiou and Baer 2002).

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stricted scope and esoteric origin', he argues that it should be taken seriously. The unsurprising outcome of this chapter is that theories based on non-identity are subject to serious objections and do not lead to a weakening of the case for taking future generations seriously in policy decisions.

Overall, Page's book is of value to those readers who relish an in-depth, philosophical and sometimes extremely subtle debate about principles of inter-generational justice. For those who want to get a good overview about distributive justice and climate change, Athanasiou and Baer (2002) is a better guide.

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Environment and Social Theory (2nd edn)

John Barry

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Ever since Wilhelm Dilthey struggled with the division between the natural and the humanistic sciences, many philosophers have doubted whether there could be a genuine connection between these disparate pursuits. The recent environmental crisis, however, has brought to our attention the need for systematic responses that uphold ecology as an inquiry linking the different sciences. John Barry's *Environment and Social Theory* provides a superb introduction to how past and present social thought can yield strategies to address a crisis that reaches every corner of the globe, and challenges us to re-examine our ties to the natural realm.