This book can be useful to academics who study decisions involving catastrophic losses: for example, environmental policy decisions connected to climate change, transgenic crops, nuclear energy and wildlife preservation. However, the book is versatile enough to be useful to broader audiences willing to learn the basics of decision theory under uncertainty as they apply to both personal and policy choices.

The book’s main contribution is a principle for choosing in the face of uncertain catastrophic losses. ‘Uncertain’ here doesn’t simply mean that the probability of catastrophic losses is lower than 1, or that instead of knowing sharp probabilities for those losses we merely know a range of probabilities. Uncertainty means instead that we do not even have enough information for assigning any probabilities at all to the catastrophic outcome (pp. 16-27).

Sunstein’s principle: we should be willing to pay to avoid uncertain catastrophic losses, at least when the price is low. (This is a constrained application of the ‘maximin’ principle according to which we should choose the option with the best worst-case outcome).

Sunstein’s contribution can be better understood and tested when applied to real-world uncertain catastrophes. In this review I will focus on climate change policy, the book’s most frequent example. Sunstein is an authoritative voice in this area, having co-led the team that set the social cost of carbon for the Obama administration.

Despite all we know about the causes of climate change, and despite having devised a metric for assessing its economic consequences, we actually know very little in terms of assigning probabilities to climate outcomes. As Robert Pindyck frequently emphasises (and Sunstein frequently recalls), even if we knew how much greenhouse gases will be emitted in the next decades, we lack reliable probability distributions for their impact on temperature, for the impact of temperature on the economy, and for the impact of the economy on welfare (Pindyck 2021: 4). We can plausibly anticipate, however, that one possible outcome of increasing greenhouse gases concentrations is catastrophic (p. 69). If temperatures increased between 5°C and 6°C by 2100, this could potentially lead to permanent double-digit global GDP losses, meaning death and starvation to hundreds of millions of humans and other species.

When uncertain catastrophic losses are at least plausible, Sunstein’s principle applies: we should be willing to pay to avoid a climate catastrophe, at least if the price is low. But is it low? Sunstein rightly warns that averting catastrophe sometimes is so costly that it itself risks catastrophe. Some people
claim that averting a climate catastrophe can indeed cause ‘massive economic downturn and geopolitical instability’ (p. 36). Sunstein casts doubt on this claim, but he nevertheless suggests at some points that the price for averting a climate catastrophe is not low. States would need to ‘spend a great deal to reduce greenhouse gas emissions. This might well be a good idea (and I think that it would be), but the result would almost certainly be higher prices for gasoline and energy, potentially producing increases in unemployment and poverty’ (p. 73).

Sunstein’s remarks here would benefit from some qualification. The free-falling prices for renewable energy suggest that transitioning away from fossil fuels may not be too costly. Moreover, properly assessing the net cost of climate mitigation requires considering whether the costs in one area cannot be offset by benefits in other areas. There is growing evidence that aggressively mitigating climate change can be net economically beneficial, even in the immediate or short term. Even leaving aside the gains from avoided climate losses, the so-called ‘co-benefits’ of abandoning fossil fuels are significant. The health benefits of reducing air, water and land pollution are so large that the investment in clean energy can be economically net positive almost immediately (Scovronkick et al. 2019). These health benefits would disproportionately accrue on less well-off people, casting doubt on Sunstein’s remark that strict regulations on fossil fuels ‘might well impose disproportionate hardship on the poor’ (p. 81). Other potential short-term co-benefits include less exposure to volatility in energy prices and a more efficient tax system (assuming fossil fuel subsidies are removed) (Green 2015).

If the price of averting a climate catastrophe is low (or actually not a price but a gain, as the mentioned studies suggest), Sunstein’s principle implies that we should be willing to pay it. It is worth ending, then, by reflecting on who in this picture is the agent paying the price and averting catastrophe. The book focuses on states, but most states cannot by themselves avert a climate catastrophe. The vast majority of countries contribute less than 1% each of the world’s greenhouse gas emissions. Most countries actually contribute less than 0.1% (Ritchie and Roser 2020). The only states that perhaps can unilaterally avert a climate catastrophe are the US (12% of global GHG emissions) and China (23%), although as mentioned we do not really know if reducing emissions by 12% or 23% would be enough to avert a climate catastrophe. Perhaps some hope can come from the fact that by acting unilaterally the US and China could lead many other states to cut their emissions too, via reductions in technology prices, providing reassurance to hesitant states, and diffusing mitigation social norms (Schwerhoff 2016).

This review has focused on Sunstein’s main contribution, but the book has much more to offer. Sunstein provides a short introduction to cost–benefit analysis, explains and questions the frequently discussed ‘precautionary principle’, and offers a succinct but precise discussion of irreversibility, a surprisingly
elusive idea. This short book shows that Sunstein has mastered the art of balancing accessibility, depth and originality.

References


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