The Tragic Science: How Economists Cause Harm (even as They Aspire to Do Good). George F. DeMartino. University of Chicago Press. xi + 265 pages
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It is now a well-known dictum that economists regard their own discipline as epistemically superior to the other social sciences (Wright 2021). Whether or not economists' self-classification in the hierarchy of sciences is apt, it can easily convince them that their techniques, knowledge and ways of looking at the world are adequate for the tasks they set themselves. But if those tasks include alleviating poverty, promoting health and mitigating the worst effects of climate change, the question of whether this 'heroic' self-image is justified arises with great urgency. In *The Tragic Science*, George F. DeMartino argues that it is not. More specifically, he makes the case that economists do not have an adequate framework for thinking about the harms they will inevitably cause in pursuit of their monumental aims. His main reasons for this claim are that economics is facing sources of irreparable ignorance and that economists can only avoid dealing with the uneven impact of their policies by adopting an under-complex conception of harm. Yet, instead of merely offering an indictment, DeMartino aims at sketching the contours of an economics that can better approach the harm it causes.

The Tragic Science does all this while staying highly accessible and entertaining to read. Most chapters start with a story – ranging from an outline of economic shock therapy in Russia to how Kerala managed the Covid-19 pandemic – that primes the reader for the following discussion. The book also tackles a range of topics spanning discussions of causal inference, moral and political philosophy, and economic history with an impressive amount of knowledge and care. In fact, I believe the great achievement of this book is to offer highly intelligible introductions to these diverse topics while also demonstrating why they matter for the development of a 'harm-centric and ignorance-based economics' (18).

In the remaining part of this review, I will proceed as follows: First, I will give a brief overview of the main steps in DeMartino's argument. Second, I will raise two general queries about the book. The first query is whether the book's focus on harm's complexity alone is justified given that its counterpart, i.e. improvements in wellbeing, is also a highly complex phenomenon (cf. Alexandrova 2017). The second query is whether it would be more fruitful to treat the issue of irreparable ignorance as a separate subject that is not only a problem for economics but for all (policy-oriented) sciences. Third, I will raise the question of who the book's audience is. DeMartino himself holds that a 'primary objective of the book is to explain to noneconomists the presumptions of harm that underlie economists' practice' (viii). However, I will make the case that *The Tragic Science* is also an excellent resource for teaching and a piece of scholarship that even seasoned economists have reason to engage with.

1. A Heroic Attempt at a Summary

The book starts with an outline of what DeMartino calls the 'deficient paternalistic ethos that guides economists' professional practice' (19). He contrasts this against

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the evolution of medical ethics, which has moved away from paternalism and now embraces principles of patient autonomy that no longer allow medical professionals to 'justify their manipulation of patients for the patient's own good by reference to beneficence' (26). This, according to DeMartino, is a change that also needs to happen in economics, where judgements about what counts as harms and benefits are still largely left to the professionals. Chapter 2 offers an extensive taxonomy of harms. According to DeMartino, harm takes many forms and is exceedingly complex. Not only are there different types of harms that cannot be easily weighed against each other – e.g. physical harms such as pain, moral harms such as the erosion of ethical values, and harms to autonomy such as the destruction of valued ways of life – but the way in which harm occurs ultimately affects its harmfulness.

With these basic premises laid open, the remaining argument proceeds in three steps. First, DeMartino outlines in Chapters 4–6 why 'economists will necessarily cause harm as they aspire to do good' (46). Second, in Chapters 7–9, he provides a clear and entertaining outline of the prevailing approach to harm in economics, which DeMartino calls *Moral Geometry*, and proclaims it inadequate in light of harm's complexity. Third, Chapters 10–12 present what DeMartino calls *Economic Harm Profile Analysis* and *Decision Making Under Deep Uncertainty* (*DMDU*) – a method developed mostly by climate scientists and management scientists – as alternative approaches for grappling with harm.

Concerning the first step, DeMartino outlines that because of different social positions, values and interests, people will be impacted differently by economic policies leading to a situation where virtually all policies that target 'diverse societies with complex social and economic arrangements' will cause harm (60). He then turns to the problem of irreparable ignorance. Specifically, DeMartino argues against the view that economics is engaged in an ever-increasing expansion of our knowledge that reduces our domain of ignorance. Instead, he holds that 'expanding knowledge makes relevant and even urgent new domains of unknowledge that previously did not concern us' (74). The chief example here is the development of artificial intelligence, which raises lots of new normative and descriptive questions. Hence, the expansion of our knowledge, says DeMartino, usually comes with an expansion of 'salient' ignorance, which can limit our ability to foresee harms. Another reason why DeMartino thinks that certain forms of ignorance are inescapable is the problem of counterfactuals. He outlines why we need counterfactuals to assess causal claims and claims about harm, before highlighting several challenges for generating dependable counterfactuals.

Having argued that economists will necessarily cause harm, DeMartino then offers a highly engaging outline of how economists usually approach the concept of harm. He quickly introduces the Kaldor–Hicks criterion, cost–benefit analysis, the social welfare function approach, and debates about discount rates and preference laundering. The readers of this journal will be highly familiar with these concepts and debates. Hence, I will directly jump to what DeMartino thinks is wrong with the *Moral Geometry* that builds on these ideas. The book emphasizes the *Long-run Paretian Promise* as a defence of the Kaldor–Hicks criterion. This defence maintains that even though 'an agent might be harmed by today's Kaldor–Hicks consistent policy innovation … [the gains they have] enjoyed in the past and will enjoy in the future from efficiency promoting

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innovations will more than offset today's losses' (134). DeMartino argues that this defence depends on two false assumptions. First, it assumes that everyone will, *in fact*, be compensated in the long run. Equipped with the concepts of social harm and structural violence (cf. Galtung 1969), DeMartino argues that harms will more likely be serially correlated due to inequalities in power and the accompanying social distance. As DeMartino puts it, '[b]eing harmed from today's policy decisions will predispose the same individuals to suffer harm again tomorrow' (167). The second assumption of the *Long-run Paretian Promise* is that the act of harming and the act of benefiting are commensurable. To show that this is not the case, DeMartino outlines how certain forms of harm do not call for compensation but acknowledgment. While compensation would suggest that the harmed individual can be made whole by a transfer of goods, there are cases where this appears to be an outrageous proposition. The examples the book offers are compensations paid to parents who lost their children in a traffic accident and reparations paid to Holocaust survivors. DeMartino persuasively argues that it would be absurd to think these monetary transfers are intended to compensate those who suffered such harms. Yet, while some harms cannot be compensated, reparation might sometimes nonetheless be available in the form of acknowledgment, apologies and recognition. If economists are not sensitive to this difference, they will fail to respond adequately to the harms their policies cause.

In light of this criticism, DeMartino then contrasts moral geometry with the capabilities approach, which he thinks will allow economists 'to widen their conceptions of the forms of and interconnections between distinct harms' and to prioritize the harms of those who 'exist in harmed conditions' (174). To be clear, the book's treatment of *Moral Geometry* and the alternative capabilities approach to harm is much more nuanced than I can portray in this review. So, let me just say that I consider this part of the book its absolute highlight. Of course, some of the arguments in these chapters will appear familiar to expert readers. There are also a few places where DeMartino trades precision in favour of scope. For instance, the discussion of utility measurement on p. 112 could have engaged with Moscati's (2018) seminal work on the topic, and the analysis of zero levels of welfare on p. 142 could have tackled recent scholarship on this issue (e.g. Fumagalli 2018). Nevertheless, the sheer range of sources from which DeMartino draws and the lucidity of his presentation are striking.

The last step of the argument then consists in offering a vision of how 'the profession [might] proceed differently were it to engage seriously the complexity of harm' (174). Here DeMartino presents two ingredients. The first is *Economic Harm Profile Analysis*, which aims to offer an additional set of normative criteria for assessing economic arrangements. The gist is that there can be substantial variance in the harms to which people are exposed across different institutional arrangements, even in the case where they share the same per capita income. By offering an analysis of these institutional arrangements along five dimensions – nature of harms, productivity of harms, distribution of harms, mechanism of harm generation, and consent and coercion – *Economic Harm Profile Analysis* is meant to help economists to think more seriously about the harms their proposals can cause. The second ingredient is *DMDU*, a set of methods for decision-making. One of these methods (Robust Decision Making) that DeMartino focuses on

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proceeds in four steps. It first consults stakeholders to frame the decision problem at hand. The idea here is to arrive at a set of objectives with no presumption that all of them can be reduced to a single metric. The second step consists of explorative modelling, where each policy is modelled several times, adjusting exogenous model inputs and the causal relationships specified by the model. The third step then aims to discover the assumptions that would most heavily impact a policy's fate and make those salient to stakeholders. The fourth step then explores the tradeoffs between various desiderata realized by different polices. While the robustness of a policy is generally prioritized here, stakeholders can decide to tradeoff small amounts in robustness for other objectives. Should all of the policies be found unsatisfactory, new policies will be devised based on what has been learned so far and the four steps are repeated. Finally, after implementing a policy, *DMDU* methods may also devise measures for monitoring the policy and specify responses for when 'load-bearing' assumptions are broken. What is vital for DeMartino is that *DMDU* respects the autonomy and agency of stakeholders. Therefore, it embodies an anti-paternalistic ethos. Moreover, given that *DMDU* does not seek to base decisions on a single prediction about the welfare effects of policy, DeMartino also holds that it is better equipped to approach the topic of irreparable ignorance.

2. Aspiring for a Harm-centric Approach?

By now, it should be clear that *The Tragic Science* is a very rich book. In what follows, I want to raise two general queries about DeMartino's harm-centric approach to economics. My first query is whether the arguments that DeMartino advances for harm's complexity equally well apply to positive wellbeing. For instance, DeMartino argues that the continuity assumption in welfare economics, which is 'thought to be a matter of simple mathematical convenience', does, in fact, 'represent a terribly important normative leap' (114). The idea here is that continuity implies substitutability. Hence, an assumption initially motivated by mathematical convenience ultimately led economists to assume that the provisions of a finite amount of some good can compensate a loss in a finite amount of a different good. While this argument, like the others DeMartino offers here, is persuasive and starts from premises welfare economists should all accept, it does not single out harm specifically. Instead, it applies equally to harm and improvements in wellbeing. Why is this a problem? DeMartino wants a harm-centric economics. Economists are supposed to do *Harm Profile Analyses* of institutional arrangements, as a single metric is not enough to capture the diverse harms these arrangements will cause. Yet, I take it that we should also not think that a single metric will be enough to capture a policy's diverse positive welfare effects. Hence, also positive effects call for an evaluation along various dimensions and a participatory and deliberative mode of policymaking (cf. Fabian *et al.* 2022). So why not treat them as equally important as harm?

DeMartino will reply here, I take it, that we have a duty not to conflate *not benefiting* with harming because the latter is of greater moral importance. He tells us that 'if we accept [this conflation], we are back in a world of kidney snatching'. And that only because 'doctors do not conflate not benefiting with

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harming are our kidneys safe when we enter the doctor's office' (139). However, I am sceptical that these conclusions inevitably follow from denying the moral priority of harming. Suppose we accept that different harms and benefits are not commensurable. In that case, not prioritizing harm but maintaining that avoiding harms and benefiting are equally important is at least an equally plausible position. Of course, this stance will make matters even more complex, but I do not see how it will turn us into kidney snatchers. The complexity of harm and welfare and the resulting incommensurability appear to be enough to prevent this. On top of this, even if one accepts harm's priority, that does not mean one should not pay attention to benefitting as well – and once we do, a multi-dimensional approach also seems important there.

My second query concerns whether or not irreparable ignorance is a problem for economics specifically. As I outlined above, one source of irreparable ignorance DeMartino mentions is that expanding knowledge will always create more salient ignorance. Yet, in this regard, there is nothing peculiar about economics. To be sure, when it comes to the specific issue of counterfactualization, DeMartino briefly argues that *DMDU*, an approach largely neglected by economists, is better than *Moral Geometry* because it 'stress-tests thousands of possible futures, without ever attempting to select the "right" forecast' (104). Yet, this is a controversial thesis, and it is hard to see how we can completely escape the problem. Even if we test a policy proposal across many possible worlds and not just in one, we still need to make contestable decisions about closeness and credibility. The general upshot here is that insofar as the sources of irreparable ignorance are problems for economics, they appear to be problems for all sciences. Therefore, the question arises whether there is anything that makes the problem of irreparable ignorance *in economics* fundamentally different from how it manifests in other sciences. If there is no relevant difference, then one wonders why a book that focuses on how economists should approach harm dedicates so much space to it.

I believe that DeMartino's answer is that the heroic ethos of economists and the resulting perception of knowing-enough make the problem of irreparable ignorance more severe for economics than for other disciplines. Yet, if this is indeed the case, I am not convinced that pointing to *Harm Profile Analysis*, *DMDU* and general sources of ignorance will persuade hard-boiled economists to change their ways. Instead, what becomes necessary then is not just an account of the ethos of economists, but also an analysis of the social and institutional factors that fostered and shielded such an ethos while similar ideas died out in other professions. In other words, what is the institutional set-up that leads economists to engage so little with work from other disciplines and to their uniform approach for dealing with harm, when instead harm's complexity seems to call for a pluralistic outlook (cf. Wright 2023)? If the problem is really the ethos of economists, I am afraid that merely pointing to alternatives will not be enough. What we need instead is an analysis of the institutions that sustain this ethos. Of course, there is only so much you can do in a book that is already so rich, and DeMartino excels in his outline and the critique of economists' usual approach to harm. Here he directly targets the justifications that economists themselves provide for *Moral Geometry*. Even the most heroic economist cannot

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ignore this part of the book. Hence, given that one can expect that DeMartino's discussion of irreparable ignorance will fall on deaf ears when it comes to this archetype, one is left wondering why he opted for such an expansive outlook when he could also have taken care of dotting the i's and crossing the t's in his engaging critique of *Moral Geometry* (keyword: kidney snatching).

3. How *The Tragic Science* will do Good

This brings me to the issue of the book's intended audience. As stated above, DeMartino wants to (also) address outsiders and explain to them why economists go wrong in their approach to harm. However, I believe that where the book is strongest, it also has the potential to shake economists out of their self-confidence because of DeMartino's ability to present material they will be deeply familiar with in a new light. For an example, just recall DeMartino's discussion of the continuity and substitutability assumptions I outlined above. On top of that, many parts of the book can also serve as excellent teaching materials as they provide clear, but charmingly opinionated introductions to the historical development of welfare economics and causal inference that will give economics students with opposing views much to chew on. So, all in all, my recommendation is: read this book! It will certainly do you no harm, and some of you may stand to benefit significantly from it.

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