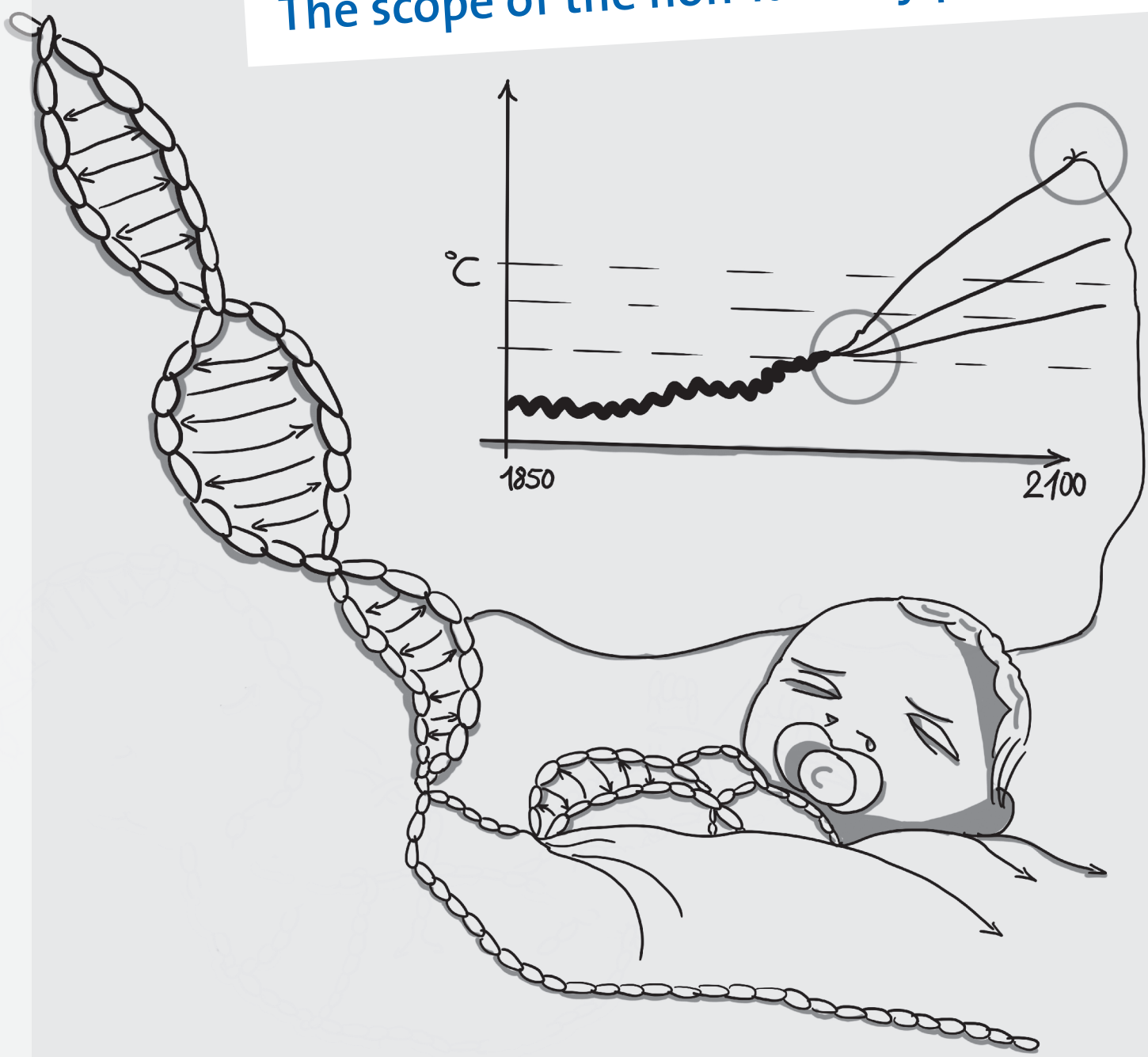
Issue 2/2019 (Vol. 5)
ISSN 2190-6335

Intergenerational Justice Review

Issue topic:
The scope of the non-identity problem



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Guest Editors of this issue

Michael Rose is a post-doctoral researcher and lecturer at the Institute of Sustainability Governance, Leuphana University of Lüneburg, Germany. He holds a Dr. phil. (equivalent to PhD) and a diploma (equivalent to a master's degree) in political science. After graduating in political science (including international relations, public administration and philosophy) at the University of Bamberg in 2012, he received a 3-year doctoral scholarship at the graduate college "Linkage in Democracy", University of Düsseldorf. From 2015 to 2018 he was a research associate at the Centre for Transformation Research and Sustainability, University of Wuppertal, and from 2016 the Centre's scientific coordinator.
Rose researches and teaches in the areas of political science and sustainability science. In his mostly theory-driven empirical research, he studies how the interests of future generations can be introduced in today's political decision-making process via proxy representation, how sustainability institutions are linked to national sustainability performance, and how scientists and practitioners can co-produce sustainability transitions in so-called real-world laboratories. His publications include the book *Zukünftige Generationen in der heutigen Demokratie – Theorie und Praxis der Proxy-Repräsentation* (Springer, 2018), the book chapter *All-affected, Non-Identity and the Political Representation of Future Generations – Linking Intergenerational Justice with Democracy* in *Intergenerational Equity: Environmental and Cultural Concerns* (Brill, 2019, see book review section) and the journal article *Constitutions, Democratic Self-Determination and the Institutional Empowerment of Future Generations – Mitigating an Aporia* (published in the Intergenerational Justice Review 2/2016).
ORCID: 0000-0001-5812-467X

Jonathan M. Hoffmann is a PhD researcher in political theory at Department of Politics and International Studies, University of Warwick. He is writing his dissertation on the design and justification of institutions for the future. He holds an MSc in Political Theory Research from the University of Oxford and a BA in Philosophy, Politics, & Economics from Witten/Herdecke University. Hoffmann teaches in the areas of political theory and sustainability at Witten/Herdecke University. He has recently published the book chapter *Eine Brille für unsere Demokratie* (Akkon Schriftenreihe, forthcoming) and the position paper (Foundation for the Rights of Future Generations) *Sieben Bausteine für eine zukunftsgerechtere Demokratie* (SRzG, 2018), both with Michael Rose.

The peer-reviewed journal Intergenerational Justice Review (IGJR) aims to improve our understanding of intergenerational justice and sustainable development through pure and applied research. The IGJR (ISSN 2190-6335) is an open-access journal that is published on a professional level with an extensive international readership. The editorial board comprises over 50 international experts from ten countries, representing eight disciplines. Permanent and managing editors are Jörg Tremmel (University of Tübingen), Markus Rutsche (St. Gallen), Maria Lenk (FRFG) and Antony Mason (IF).

Editorial

In the early 1980s, Derek Parfit used the example of a 14-year-old girl to illustrate the "non-identity problem" (NIP). The girl was about to decide whether or not to conceive a child at her age, and Parfit argued that she would not make that particular child worse off by conceiving now (although giving him a bad start in life) as opposed to waiting a few years and heaving a child as a grown-up. Since the girl's child would not exist if it had not been born at that time, it could not blame its mother for its bad start in life, as long as it has a life worth living.The NIP has been part of the philosophical debate on intergenerational justice ever since.

Does the NIP also apply beyond the biomedical? For this IGJR special issue, scholars were invited to assess the scope and relevance of the NIP in questions of climate change (C-NIP). Can future persons blame us for our (lack of) climate policies? In three contributions (Hoffmann, Nedevska, Unruh), Parfit's 14-year-old girl is still discussed, and this question remains hotly disputed.

For this controversial topic, we have been trying something new: In addition to regular peer-reviewed articles and reviews of selected new publications, we asked several researchers to share their perspectives regarding the C-NIP debate in a short opinion piece. Although we provided feedback on the submitted manuscripts, these opinions did not undergo a regular peer-review process. Being opinions, we have left it to the authors' judgment whether or not they revise their manuscripts. The IGJR editorial team would be very pleased to receive feedback from the inclined reader on this new format.

The issue begins with six opinion pieces on the C-NIP, followed by two research articles by Thomas Bontly and Jasmina Nedevska, respectively, and two book reviews. In the first opinion piece, Ramon Das (Wellington, NZ) applies the C-NIP to historic injustice and argues that employing intragenerational counterfactuals – as opposed to intergenerational ones – can avoid the NIP and in some cases sustain harm claims. In the second opinion piece, Charlotte Unruh (Southampton) maintains that the C-NIP does not only apply to questions of harm, but also to questions of benefit. She suggests that solutions to the C-NIP will have to take both harm and benefit into account.

The next two opinion pieces are concerned with whether remote acts and effects are causally and/or morally relevant for the identity of future humans. Jörg Tremmel (Tübingen) maintains that Parfit's concept of causality is distinct from conceptions of causality employed in legal studies as well as in the sciences and argues that the non-identity effect of climate policies is overstated, once alternative conceptions of causality are employed. Contrarily, Jonas Harney (Saarbrücken) argues that indeed virtually every small single act may affect the identity of distant future individuals (see also Bontly). However, he points out that the C-NIP is only a problem to moral theories that employ a comparative personal view.

Referring to Rawls's veil of ignorance, Jonathan M. Hoffmann (Warwick) suggests employing a wide person-affecting view to questions of intergenerational justice. In contrast to the narrow person-affecting view that is linked to the NIP (see also Harney), it disregards the very identity of future individuals and emphasises the moral relevance of their human and citizen status. In the final opinion piece, Michael Rose (Lüneburg) shares a story of the lack of appreciation of the C-NIP outside of philosophical circles and argues that this is for a good reason. He introduces the "arbitrary status quo argument" that renders the C-NIP morally useless. Moreover – sounding the same horn as Hoffmann – he points out that in political practice, the citizens' interests brought into political decision-making are not individualised anyway.

The relevance of the C-NIP is debated in greater depth in two research articles. Discussing different arguments and methods of causal inference, Thomas Bontly (Storrs, CT) employs a difference-making perspective and shows that there is indeed a highly significant non-identity effect of climate change policies. Jasmina Nedevska (Stockholm) analyses the differences between the NIP in bioethics and the C-NIP and – drawing a parallel to a case of climate change litigation in California – argues that the C-NIP might indeed have practical political implications.

To sum up, at least two questions are to be asked regarding the C-NIP: First, do climate policies (or the lack of them) affect distant future peoples' identities in a significant way (the non-identity effect, in Bontly's terms)? And second, is this morally and politically relevant? Addressing the first question, several contributions in this issue discuss the kind of causal reasoning the C-NIP is based upon. Whereas Bontly, Das and Harney affirm the non-identity effect and emphasise the crucial role of comparisons of (counterfactual) alternative worlds for the NIP and its concept of causation, Tremmel holds to his claim that the causal influence of a certain identity-affecting policy is often insignificant from a legal or scientific (particularly statistical) perspective.

Regarding the second question, most authors (not all, though) seem to grant the NIP a certain moral and political relevance within the narrow person-affecting view. At the same time, several authors seem to allow for or even emphasise alternative ways of dealing with the C-NIP that uphold the moral relevance of the current generation's actions with regard to future generations, among them Das, Hoffmann and Rose.

What does all of this mean for Parfit's 14-year-old girl? After all, only one thing is for sure: now in her early 50s, that woman still is a troublemaker. And most probably, she will continue to be.

This special issue ends with two book reviews. First, Nicky van Dijk (Hobart, TAS) reviews *Intergenerational Equity*, edited by Thomas Cottier et al. (Brill Nijhoff 2019). The book, provided with a foreword by Edith Brown Weiss, offers a variety of authors and interdisciplinary perspectives on the topic, focusing on juridical, philosophical, historical and economic dimensions of environmental, cultural and political intergenerational equity. Second, Melissa Ihlow and Maria Lenk (Stuttgart) review *Humans in the Global Ecosystem*, edited by Pierre L. Ibisch et al. (Oekom Verlag 2019). The book provides a comprehensive, interdisciplinary and solution-oriented introduction to sustainable development.

Michael Rose and Jonathan M. Hoffmann, Guest Editors

Intergenerational justice, intra-generational counterfactuals, and the non-identity problem

by Ramon Das

A natural way of understanding the difficulty posed by the non-identity problem (NIP) for questions of intergenerational justice is that it blocks the transmission of plausible moral claims about collectives to their individual members. It is plausible, for instance, that some rich states of North America and Europe are morally responsible for historic injustices associated with colonialism and slavery; and for historic emissions that have produced harmful climate change. Likewise, it is plausible that indigenous peoples and African Americans have been harmed by the legacy of colonialism and/or slavery; and that many poor, undeveloped states have failed to benefit (via industrialisation) from historic carbon emissions. Yet the NIP seems to block the transmission of such claims about groups to present-day individuals.

In all such cases, the fundamental non-identity problem derives from a natural counterfactual reading of *what it means* to say that present-day individuals are morally affected by long-ago actions or events. Such counterfactuals are overtly intergenerational, purporting to consider what the moral implications for an individual would be, had some event(s) prior to her conception not occurred. For instance, if we understand "Anika has been harmed by the legacy of colonialism" as the counterfactual claim that Anika would have been better off had British colonialism never occurred, then we face the familiar problem that Anika *would not have existed* had British colonialism never occurred. Again, it is the overtly intergenerational reading of the relevant harm claim that invites the NIP. And this raises the question: is there another way of understanding such claims that preserves their meaning but avoids the NIP?

I argued that there is.[1] Focusing on the case of climate change, I show that there is a way of understanding the claim that citizens of rich developed states have benefited from industrialisation that appeals to *intra*-generational counterfactuals rather than the usual intergenerational ones. For instance, we can understand "Esther has benefited from industrialisation" as the counterfactual claim that Esther is better off than she would have been, had she been raised from birth in a poor, undeveloped country. This reading of the relevant benefit claim evades the NIP altogether, since it rests on intra-generational counterfactuals that do not refer to events that occurred before Esther was conceived.

I'll now suggest that this intra-generational approach to intergenerational justice can be extended to certain cases of historic injustice, when three conditions are met. First, it should be relatively easy to imagine (counterfactually) that a person could have been raised in a group very different in morally relevant respects from the group in which she is (actually) raised. Second, being raised in that alternative group should make a morally relevant difference to the person's life. Third, it should be plausible that the relevant groups have been harmed by or benefited from some historic action or event. When these three conditions are met, morally relevant historic harms or benefits are plausibly transmitted from collectives to their present-day individual members and the NIP does not arise.

For example, suppose that Haiti – the poorest country in the western world – has been harmed by the legacy of French colonialism. (This satisfies our third condition.) If so, it seems intuitively plausible that a present-day Haitian, Phillipe, has been harmed by that legacy as well. We can understand this claim as follows: statistically, it is highly probable that Phillipe is materially worse off than he would have been, had he been adopted at birth and raised by a French family in France.

In this case, it is deeply plausible that our first two conditions are met, since it is easy to imagine – indeed is doubtless true – that some very poor Haitian children have been adopted by French families, and plausible that they have benefited (at least materially) from being raised in France. In general, the first two conditions will be met in cases in which historic injustice involves two geographically distinct groups (e.g. France and Haiti) and is closely linked to vastly different life prospects for present-day inhabitants of the two groups.

Compare this to the case of slavery in the United States. In this case, the two groups (American whites and blacks) are not geographically distinct in anything like the way that France and Haiti are distinct. More important, due to the inherently racial aspect of the relevant historic injustice, it is unlikely that the second condition is met: it is far from obvious that an African American child would be better off being raised by a white family in a predominantly white neighbourhood. So it seems fair to say that the intra-generational approach doesn't work equally well in all cases of historic injustice. Nonetheless, it clearly works and avoids the NIP in some important cases.

Ramon Das is a Senior Lecturer at the University of Wellington, New Zealand.

Notes

1 Das, R. (2014): Has Industrialization Benefited No One? Climate Change and the Non-Identity Problem. In: Ethical Theory and Moral Practice, 17(4), 747-59.

Can we benefit in non-identity cases?

by Charlotte Unruh

Many people believe that we have a moral reason to benefit others. However, this reason is commonly thought to be weaker than the reason against harming others. This might explain why relatively little attention has been paid to the morality of benefiting in non-identity cases. My aim is to convince you, in the next few paragraphs, that this is a decisive oversight. The non-identity problem arises in cases of harming and in cases of benefiting alike. It is therefore broader in scope than is often acknowledged. The most promising solutions of the non-identity problem are harm-based, but such solutions will need to provide suitable accounts of both harming and benefiting.

In his classic "Risky Policy" case, Derek Parfit describes a community that has to decide between two policies.[1] They choose the risky policy, which is cheaper in the short term, but likely to result in a future catastrophe. The choice of policy influences who will be born. Therefore, the victims of the future catastrophe would not have lived, and thus not be better off, had the other policy been chosen. The non-identity problem is the challenge to explain the intuitive verdict that we should nonetheless not choose the risky policy.

Now, consider the following variant:

> (Beneficial Policy) As a community, we can choose between two policies. Both policies do not significantly impact the wellbeing of the next few generations, but one policy will provide certain benefits for those living in the further future. If we choose the Beneficial Policy, the standard of living would be a tiny bit lower over the next few centuries. We do not choose this policy. As a result, the people in the further future do not have access to the benefits.

Assume (in analogy to Risky Policy) that which policy we choose affects who will live in the future. If we choose the beneficial policy, then one set of people will exist. Let's call them the Lucky People. If we do not choose the beneficial policy, then a different set of people will exist. Let's call them the Unlucky People.

This assumption is plausible, or at any rate, it is just as plausible as it is in Risky Policy. Some of our policies potentially affect those living in the far future. Investments in technology development and medical research, usage of scarce resources, or disarmament policies might have significant long-term effects without (necessarily) making much of a difference for those who currently exist. One might object that if a choice is changing people's lives significantly (and is therefore identity-affecting), it is likely to be costly, as people have to adapt to new ways of life. However, this need not be the case. It is at least conceivable that this might be outweighed, e.g. by people's satisfaction from seeing sustainable policies put in place, or small benefits that show already earlier.

Here is another plausible assumption: we benefit people by making them better off than they would otherwise have been. If this assumption is true, then the Unlucky People can't complain about our choice based on our obligations to benefit. After all, they would never have existed, and therefore not been benefited, had we chosen the beneficial policy. In other words, it is not the case that obligations to benefit entail that we ought to choose the beneficial policy. Let's call this the positive non-identity argument.

The conclusion of the positive non-identity argument is – while less devastating than that of Risky Policy (at least it doesn't end in a catastrophe!) – still disturbing. If you share its premises, then you end up with the view that we cannot benefit people in those cases or prevent harm to them. This challenges the view that we have a moral reason, if not an obligation, to choose the beneficial policy.

It seems to me that we should choose the beneficial policy. It also seems clear to me that we should do so *because* this would benefit future people. The most natural explanation of intuitions in Risky Policy is that choosing the risky policy risks harm to future people. This has motivated harm-based solutions to the non-identity problem (e.g. Shiffrin 1999; Harman 2009; Gardner 2015).[2] Similarly, the most natural explanation of intuitions in Beneficial Policy is that choosing the beneficial policy benefits future people. Therefore, I believe that the most plausible solution to the non-identity problem will not only rely on an understanding of harming that explains how, and to what extent, the people in Risky Policy are harmed. It will also explain how, and to what extent, we fail to benefit the people in Beneficial Policy.

In Risky Policy and Beneficial Policy, our decision indirectly influences the identity of future populations. In contrast, in some cases in reproductive ethics, decisions such as whether to implant one embryo rather than another directly and necessarily influence who will be born. As Jörg Tremmel has argued,[3] and as Jasmine Nedevska, and Michael Rose argue in their contributions to this volume, there might be reason to doubt that the scope of the non-identity problem extends beyond reproduction cases. It is therefore worth pointing out that my argument applies to reproduction cases as well. To illustrate, consider Parfit's case of the 14-year-old girl who decides to get pregnant, despite knowing that because of her age, she will not be able to give her child a good start in life.[4] A variant of this case is:

> (18-year-old woman) A young woman contemplates whether to have a child now or later. On a whim, she decides to have a child now. She gives her child an adequate start in life. If she had waited, she would have had a different child, to whom she would have given a much better start in life.

It seems to me that the woman has at least a good reason to postpone conception. The most natural explanation is that doing so would benefit her future child.

I conclude that if we accept any version of the non-identity prob-

lem, we should also accept its positive counterpart: we are challenged to explain why we ought to behave in ways that prevent harm to, or benefit, people, even though doing so does not make *their* lives go any better.

Charlotte Unruh writes her PhD thesis in philosophy at the University of Southampton, UK.

Notes

1 Parfit, D. (2010): Energy Policy and the Further Future. In: Gardiner, S. M. et al. (eds.): Climate Ethics – Essential Readings. Oxford: Oxford University Press, 112-121, here 112.

2 Shiffrin, S. V. (1999): Wrongful Life, Procreative Responsibility, and the Significance of Harm. In: Legal Theory, 5 (2), 117-148; Harman, E. (2009): Harming as Causing Harm. In: Roberts, M. / Wassermann, D. T. (eds.): Harming Future Persons. Ethics, Genetics and the Nonidentity Problem. Dordrecht: Springer, 137-154; Gardner, M. (2015): A Harm-Based Solution to the Non-Identity Problem. In: Ergo, 2 (17).

3 Tremmel, J. (2018): Fact-insensitive thought experiments in climate ethics – Exemplified by Parfit's non-identity problem. In: Jafry, T. (ed.): The Routledge Handbook of Climate Justice. London: Routledge, 42-56.

4 Parfit 2010, 117 (see footnote 1).

The dispute about the climate non-identity problem – looked upon from the paradigm perspective

by Jörg Tremmel[1]

Since 2009 I have been writing a series of texts about the scope of the non-identity problem.[2] When I offered my argument – the insignificant-causal-factors rejoinder – to the community of moral philosophers, I had expected that colleagues would readily admit that they had been unclear about the methodological status of the climate non-identity problem (C-NIP). But nothing of this sort happened. In this short opinion piece, I try to explain different views on causality, using the paradigm theory.

My line of reasoning cannot be fully repeated here but a short form goes as follows:

(1) The NIP in biomedical contexts cannot be contested. As an illustration, I have used the case of a rape.[3] If an abortion is ruled out, this act will induce the existence of a particular child with a unique genetic endowment.

(2) The extension of the scope of the biomedical NIP to the context of climate change is problematic. The C-NIP is the view that our energy/climate policy is among the factors that decide the genetic identity of (distant) future persons. And if a risky climate policy is not harmful for them, as Parfitians claim, theories of climate justice need to be reassessed. I argued that these philosophers skip the causality question and move directly to a moral discussion. But their moral problems arise only if a very specific concept of causation is employed.

Imagine the following: In 2020, child A was born. One year before, the parents of A had met in a disco for the first time. Before entering this disco that very night, each of the prospective parents considered him/herself to be single, but wanted to enter into a relationship. In the club were hundreds of potential partners for each of the actual parents-to-be of child A.

Two years before, the US president had announced that he would leave the Paris climate agreement which led to a high emissions policy in the US during the following years. One of the coal mines that was scheduled for closure in 2017 was in fact not closed under the Trump administration, and one of the people working there was AA, the father-to-be of child A. Had the coal mine been closed as scheduled by the Obama administration, AA would have moved to another city and he would not have met BA, the mother-to-be of child A.

Fifty years before, in 1968, a forest planting scheme took place in the Appalachians. This brought volunteers together, and one of them was AAA, the grandfather-to-be of child A. At that time he met the girlfriend of the grandmother-to-be (BAA) of child A. This girlfriend (BAA-X) introduced AAA to his later wife BAA, and without that gathering of volunteers in the Appalachian mountains, child A would not have been born in 2020.

Climatically, the year 1816 is known in Europe and North America as "the year without a summer". During the calendrical summer, snow fell in New England and the sky was gloomy and dark all summer long (this extraordinary weather was caused by an eruption of Mount Tambora). Unlike in other years, the carpenter AAAAAA, the great-great-great-grandfather-to-be of child A looked (and found) work in the south of the newly founded United States. He had a short affair with a woman who became pregnant and gave birth to BAAAA, the great-great-grandmother-to-be of child A.

Around 700 years before the birth of child A, in the year 1320, one family in Central Europe made the decision to give up their farming existence and move to the city. At that time, European peasants suffered from what is today known as "the Little Ice Age", that is a decrease of average temperatures (not induced by mankind). This also was one instant in the circuitous route that eventually led to the birth of child A.

2,000 years before the birth of child A, in the year 20 AD, a Roman legionary who had the best chances to become emperor was killed by a falling roof tile when he marched through the streets of

Rome. This particular roof tile was rendered loose by dry weather during that summer (and the weeks before). The logging of the forests in the Roman Empire had changed the climate regionally. The death of the Roman legionary (BAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA...-XTRLY...) was "decisive" in the potpourri of events in the sense that without this historic event, the great-great (...)- mother-to-be (66 generations back) of child A would not have been born.

For the sake of argument, we assume that all these incidents, acts and policies (and with them, a myriad more) were "causal" for the conception of child A. Now, what conclusions can be drawn from such a sequence, or rather potpourri, of events? There were incidents (the regional logging at 20 AD and US climate policy since 2017) that were human-induced climatic events (as such giving rise to non-identity problems). And there were incidents such as the eruption of Mount Tambora or the "Little Ice Age" that were not anthropogenic thus being (non-)identity events, but not giving rise to moral (non-)identity problems.

The distinction between the (non-)identity effect and the (non-)identity problem should be clear by now. It requires a two-fold analysis, the first one being epistemological, the second one ethical. Moral philosophers are often ill-equipped to deal with the former, which may be a reason why they tend to jump to the latter. But the causality discussion is antecedent to the morality discussion, and the latter depends on the outcomes of the former.

(3) The Parfitian concept of causation takes into account too many *necessary* conditions, among them "insignificant" ones. The underlying rationale of the "insignificant-causal-factors rejoinder" is that the Parfitian concept of causation is at odds with the concept of causation that is usually used in law and science.

One example from the judicial sphere: if a man, out of anger, sets fire to the car of his girlfriend, he caused the flame. It is true that the car would not have burned if there were no oxygen in the air that surrounds the car. But the oxygen still is not "causal" in the burning of the car. At best, the oxygen is an auxiliary condition. When a judge lists the causes for the arson in his summing up, he will only consider the significant causal factors.

In a related but different way, statisticians (including climate scientists who use statistics) cut causation chains short. Everyone knows (or should know) the statistician's favourite phrase: correlation is not causation. But to describe the statistical concept of causation is actually quite technical, involving terms such as regression analysis, (in)significance levels and one-way analysis of variance. It might suffice here to say that their concept is incompatible with the Parfitian concept of causation.

To justify his view on the climate NIP, Parfit uses the following picture in his energy/climate ethics article: "As we have seen, children conceived at different times would in fact be different children. So the proportion of those later born who would owe their existence to our choice would, like ripples in a pool, steadily grow."[4] The ripple analogy is very instructive, but in reality it differs from the way Parfit used it. We must rather think of a pond into which a great number of stones are thrown simultaneously at every moment in time (not just one after another always at the same spot). Their waves and ripples will superimpose on each other and create a picture that looks very non-linear, or chaotic. Now refine this analogy and imagine that the stones are of different sizes, from small pebbles to rocks.[5] The item that symbolises the (risky) high emissions policy will make a ripple but all the other items will also make ripples, sometimes much bigger ripples.

The waves and ripples obviously hit the shore somewhere. Now, imagine that at one specific point of the shore there is a measurement station that measures the height of each and every incoming wave. Think of a floater that moves vertically at a pier. A signal sounds as soon as incoming waves have a certain height, say 10cm. The higher the incoming waves, the louder the signal. But the scientists have set the measurement mechanism in a way that small ripples (less than 10cm) do not trigger any signal. All stones are causal for a certain height of an incoming wave (= all antecedent acts or events that were decisive for the birth of child A), but the range of the waves and ripples between zero and 10cm can be considered "insignificant". That does not mean that the causal acts or events (climatic incidents at different times) did not exist, but their explanatory power is too weak, statistically speaking.

Did my argument change the debate? No. Interlocutors kept telling me that for the C-NIP to hold, all that is required is that *if* a particular policy were to happen, then a different combination of sperm and egg would result.

I still think that the insignificant-causal-factors rejoinder is sound and that it refutes anyone who states that there are no intergenerational climate duties because of the C-NIP. Likewise, the Parfitians continue to think that this is a "real world problem" and that it was not relativised by my argument. Someone must be wrong here, one might conclude. But there is maybe a third possibility, namely the paradigm perspective as outlined by Thomas Kuhn in 1962.[6] Kuhn describes some turning points in the understanding of the world. According to Kuhn, the introduction of novel theories regularly and rightly provokes resistance from professionals whose particular field is concerned. Kuhn believes that resistance to new ideas is legitimate because it is the only way to make so-called "normal science" (science outside revolutionary times with paradigm shifts) possible. He holds that only through normal science can an academic community first explore the potential reach and accuracy of the older paradigm and then work out the difficulties through the study of which a new paradigm may emerge.

Thus the third possibility is that both sides are right – each one within their own paradigm. This could explain why well-intentioned and smart philosophers cannot agree. If adherents of the different paradigms are asked to review submissions of the other camp, sheer incomprehension may be the result.

Jörg Tremmel is an Extraordinary Professor at the University of Tübingen, Germany.

Notes

1 This is an abridged version of a 3000-words opinion piece with the same name which is available online (see footnote 2). The acknowledgments are in the original version.

2 The ones that are written in English are (1) Tremmel, J. (2009): A Theory of Intergenerational Justice. London: Earthscan, 35-46; (2) Tremmel, J. (2014): The Non-Identity Problem: An Irrefutable Argument against Representation of Future Generations? In: Enders, J. / Remig, M. (eds.): Theories of Sustainable Development. London: Routledge, 126-144; (3) Tremmel, J. (2018):

Fact-insensitive thought experiments in climate ethics – Exemplified by Parfit's non-identity problem. In: Jafry, T. (ed.): The Routledge Handbook of Climate Justice. London: Routledge, 42-56. All texts are available at https://www.researchgate.net/project/Nonidentity-problem-in-the-context-of-intergenerational-justice-English-language-texts, including the unabridged version of this opinion piece here.

3 Tremmel (2018), 42 (see footnote 2).

4 Parfit, D. (2010): Energy Policy and the Further Future. The Identity Problem. In: Gardiner, S. M. et al. (eds.): Climate Ethics: Essential Readings. Oxford: Oxford University Press, 112-121, here 113.

5 I spoke of "butterfly effects" and "eagle effects" in Tremmel (2014) (see footnote 2).

6 Kuhn, T. S. (1962): The Structure of Scientific Revolutions. Chicago: Chicago University Press.

Comparative personal views and the non-identity problem

by Jonas Harney

The non-identity problem (NIP) is a severe problem for the ethics of future people: Today's acts can influence the identity of future people.[1] If so, the common moral reasoning that we ought to avoid making people worse off and, thus, harming them fails with respect to these future people. The NIP is not a problem for all moral theories. But it is highly pertinent for all moral theories that adopt, or partly incorporate, a

> *Comparative Personal View*
>
> The moral status of an act *A* necessarily depends on the comparative relation between a property *F* of some person *P* as a consequence of *A* and *F* of *P* as a consequence of the relevant alternative(s).

Comparative Personal Views compare a particular person's property as a result of one action with the property of the very same person as a result of the alternatives. Therefore, they are subject to the NIP: If an act affects who will exist in the future, some particular person *P* who would exist as a consequence of that act would not exist in the relevant alternative(s). And since a property cannot exist without the bearer of the property, there is no property *F* of *P* as a consequence of the relevant alternative(s) that the property *F* of *P* as a consequence of *A* could be compared with.[2] Thus, Comparative Personal Views do not produce any wrong-making features with respect to non-identical future persons. They do not apply to (the parts of) actions that influence the identity of future people.

How serious is the problem? Melinda Roberts and Jörg Tremmel argue that it is small, because the effect on the identities of future people is rather insignificant: the existence of virtually every person is highly precarious given all the causal influence that contribute to a particular person coming into existence. Melinda Roberts argues from this that for most acts there would be a chance that some person exists in some alternative that is accessible to the agent.[3] Therefore, we would need to take into account the very small chances that particular persons exist in an alternative anyway and assess the acts on basis of expected comparisons of people's *F*-extents. Jörg Tremmel, by contrast, insists that many acts would play just one very small causal role leading to the existence of a particular person. Given the insignificant causal influence of a particular act on the existence of people, we could justifiably ignore the very small chances for a particular person coming into existence as a consequence of a particular act.[4] If successful, both reasonings would massively reduce the scope of the NIP. It would not be a serious, or real-world problem, then.

However, these counterarguments overlook the specific characteristics of Comparative Personal Views. First, the very small chances of each particular person coming into existence exponentiate, because for a particular person's property to be compared, the person needs to exist as a consequence of the act *and* as a consequence of at least one alternative. And the chance that a person would exist as a consequence of two acts is the product of both these very small chances. Hence, if each particular act causes a particular person to exist with only very small chances, the chances that this very person would exist as a consequence of an act *and* as a consequence of the alternative that is available to the agent are astronomically small. But even if it were true for each act that some people could exist independently of choosing this act, (many) other people's identities would still be influenced by each particular act. Insisting here that this kind of influence is negligible does not help either. For such a move just amounts to a rejection of Comparative Personal Views: the status of an act would not depend on the relation between *P*'s *F* as a consequence of *A* and *P*'s *F* as a consequence of the relevant alternative anymore. Hence, the NIP is still a problem for Comparative Personal Views. They fail to take into account the morally relevant properties of those people whose identities are nevertheless altered by an act and, thus, disregard the moral significance of the properties of still quite many future people.

Second, Comparative Personal Views compare the relevant alternative courses of action that are available to the agent. Causal factors *previous* to a particular act do not reduce the morally relevant causal effect of that act on the existence of particular individuals. They are

irrelevant because they bear on the consequences of all available alternatives likewise. Hence, an act influences whether a person exists or not independently of previous causal dependencies. *Subsequent* causal factors may additionally alter the identity of future people, though. But they do not countervail the causal effect of an act on the identities. Subsequent causal factors would rather further extend the range of possible people. If so, the particular act still determines *the set of possible people* from which one particular person then comes into existence as a consequence of the subsequent causal factors. And if the set of possible people determined by an act and the set of possible people determined by the act's alternative are disjunct, there is no person who could have existed as a consequence of the act *and* as a consequence of the alternative act. Thus, a person's existence still hinges on that very act.

Robert's and Tremmel's attempts to diminish the practical significance of the NIP fail. Tremmel's alleged counterargument even highlights the severity of the problem: many events influence the particular identities of future people. Hence, virtually every act can have tremendous effects on the existence of future people; not just acts that are large in scale such as Parfit's depletion example[5] or his energy policy example.[6]

Jonas Harney is a philosophy PhD student at Saarland University, Germany. He currently works as a research assistant at Humboldt University Berlin.

Notes

1 I use "people" and "persons" interchangeably.

2 Some philosophers try to avoid this by comparing *F* of a person *P* who exists as a consequence of the act with *F* of some *other* person S who exists as a consequence of the alternative, see Hare, C. (2007): Voices from Another World: Must We Respect the Interests of People Who Do Not, and Will Never, Exist? In: Ethics, 117 (3), 498–523; Meacham, C. 2012: Person-Affecting Views and Saturating Counterpart Relations. In: Philosophical Studies, 158 (2), 257–287). These solutions deviate from Comparative Personal Views, though, since Comparative Personal Views compare the extents of *F* of *the very same person*.

3 Roberts, Melinda A. (2007): The Non-Identity Fallacy: Harm, Probability and Another Look at Parfit's Depletion Example. In: Utilitas, 19 (3), 267–311.

4 Tremmel, J. (2018): Fact-insensitive thought experiments in climate ethics – Exemplified by Parfit's non-identity problem. In: Jafry, T. (ed.): The Routledge Handbook of Climate Justice. London: Routledge, 42-56, here 44-52.

5 Parfit, D. (1984): Reasons and Persons. Oxford: Claredon Press, here 361-362.

6 Parfit, D. (2010): Energy Policy and the Further Future. The Identity Problem. In: Gardiner, S. M. et al. (eds.): Climate Ethics: Essential Readings. Oxford: Oxford University Press, 112-121, here 112.

Climate change, non-identity and moral ontology

by Jonathan M. Hoffmann

My students tend to rank Parfit's *Energy Policy and the Further Future*[1] among their favourite pieces. It is a marvellously argued, eye-opening paper. One of the most interesting passages comes right at the end, when Parfit suggests that we should act as if we had never realised that the non-identity problem exists:

> *"When we are discussing social policies, should we ignore the point about personal identity? Should we allow ourselves to say that a choice like that of the Risky Policy or of Depletion might be against the interests of people in the further future? This is not true. Should we pretend that it is? […] I would not want people to conclude that we can be less concerned about the more remote effects of our social policies. So I would be tempted to suppress the argument for this conclusion."* (2010 [1983], 119)

In the paper, Parfit continuously stresses the implications of our views on personal identity. He differentiates between what he later, in his *Reasons and Persons*, calls a "narrow" and a "wide" person-affecting view (1984, ch. 18).[2] On a narrow person-affecting view, we take seriously each person's identity and assume that it is determined by its genome which is a product of a certain ovum and a certain sperm cell (112-113). On this view, we may then evaluate an action by considering its impact on each individual that is affected. An action is, thus, better or worse because it is better or worse for someone.

Consequently, there may be alternative actions available to perform that *seem* better or worse, but aren't really, as they are not better or worse for someone. One example that illustrates this point is the case of a 14-year-old who decides to have a child and, due to her age, gives the boy she conceives a bad start in life (113). In response, one may want to argue that she should have had a child later and that that child would have had a better start in life. This, however, overlooks that the boy that has been born to the young mother could not have been born later: the child she actually had could only come into existence because she decided to become a mother when she was 14. Hence, Parfit argues, we can "not claim that, in having this child, what she did was worse for *him*" (113, italics in the original).[3]

Let us now turn to the wide person-affecting view. On this view, we may not consider the effect on each individual but should consider the overall wellbeing of all individuals for each available action.

Taking this perspective, it does not matter whether the individuals that are affected are identical to those individuals that would have been affected had another option been taken. The wide person-affecting view is ignorant regarding personal identity. Accordingly, on a wide person-affecting view, a decision can be better or worse despite not being better or worse for someone. In the case of the young girl, this view underpins Parfit's intuition that she should have waited, for the child that would have been born later would have had a better start in life and overall wellbeing would assumedly have been higher. So, on this view, one can say that the mother acted wrongly as she could have done better by having a child later. Parfit contends that the wide person-affecting view must be broadly utilitarian in its approach, as he believes that an appeal to rights cannot solve the problem – people would rather waive their rights than not be born at all.[4] In *Reasons and Persons* (ch. 17, 18 and 19), he discusses some versions of the wide person-affecting view and finds that they also have troubling consequences, among them the repugnant conclusion and the mere addition-paradox.

To sum up. On the narrow person-affecting view, we are not able to say that the girl wronged her child, while Parfit's wide person-affecting view allows us to say she did wrong. However, the wide person-affecting view has some very undesirable consequences, too. My suggestion, then, is this: let us adopt a more plausible version of a wide person-affecting view. As Jeffrey Reiman argues,[5] we should make use of Rawls's original position[6] when thinking about non-identity cases. Rawls designs the original position as the fair circumstances for a hypothetical contract that can be imagined by any individual to have access to. Because of the veil of ignorance, people in the original position lack any knowledge of their personal identity, their capabilities, their age, gender, race, intelligence, status, etc. Importantly, they also don't know the generation they belong to. Such a view of persons may also be called the "citizen type" view.[7] Instead of focusing on the individual "token" with all its personal features, we should only consider the "type" with its "identity independent features".[8]

On such a view we can consider various hypothetical outcomes of policy options and compare them, but without the need to aggregate the wellbeing of all those (possibly) affected and without falling for the repugnant conclusion and the like, while at the same time being able avoid the non-identity trap that may lead us to conclude that the wellbeing of people in the far future is morally insignificant. In the case of the young girl we can, on this view, say that she did wrong her child as she did not fulfil his right to normal functioning.[9]

What this comment thus suggests is (a) that we should carefully reflect upon which view on personal identity we employ when we think about our responsibility to future people, for example with regard to the climate crisis, and (b) that a Rawls-inspired "citizen-type" view may provide a good stance for such reasoning. Indeed, on such a view, there is no need to "suppress" the argument as Parfit suggests for the narrow person-affecting view. Furthermore, there is then also no reason to worry – as the call for opinion pieces for this volume does – whether "the NIP logic [is] misleading if carried over directly to climate change."[10]

Jonathan M. Hoffmann is writing his PhD thesis at the University of Warwick on the design of institutions for the future. He is one of two guest editors of this IGJR issue.

Notes

1 Where not mentioned otherwise, references are made to Parfit, D. (2010) [1983]: Energy Policy and the Further Future. The Identity Problem. In: Gardiner, S. M. et al. (eds.): Climate Ethics: Essential Readings. Oxford: Oxford University Press, 112-121.

2 Parfit, D. (1984): Reasons and Persons. Oxford: Oxford University Press, ch. 18.

3 He assumes that the boy's life is worth living.

4 Parfit 1984, 364-366 (see footnote 2).

5 Reiman, J. (2007): Being fair to future people: the non-identity problem in the original position. In: Philosophy and Public Affairs, 35 (1), 69-92.

6 Rawls, J. (1971): A Theory of Justice. Cambridge, MA.: Harvard University Press.

7 Heyward, C. (2008): Can the all-affected principle include future persons? Green deliberative democracy and the non-identity problem. In: Environmental Politics, 17 (4), 625-643.

8 Kumar, R. (2003): Who can be wronged? In: Philosophy and Public Affairs, 31 (2), 99-118.

9 The approach supposedly also works with other currencies of justice, cf. Reiman (2007), 84 (see footnote 5).

10 I'd like to thank Charlotte Unruh, Michael Rose and Simon Caney for valuable comments on earlier drafts. All mistakes that remain are mine.

Non-identity – So what? A political scientist's perspective on a curious but somehow arbitrary problem

by Michael Rose

As a political science graduate, I did my PhD research on the political representation of future generations. I came across the non-identity problem (NIP) for the first time when I was reading the philosophical literature relevant for my research. At this time (in 2012), literature on future generations was almost only found in moral and political philosophy. In mainstream political science, nobody seemed (yet) to care, especially not for academic curiosities such as the NIP. Since the

late 1970s, scholars rooted in Anglo-Saxon philosophy had been discussing the NIP in relation to the question of whether and how we should consider the interests of future generations today.[1] It has been part of the future generations debate ever since.

Later on, in an interdisciplinary PhD colloquium with political philosopher Geoffrey Brennan as a special guest, I briefly introduced my research topic. It comes as no surprise that the first thing Professor Brennan said to me afterwards was that I would have to address the NIP in my thesis. Knowing that he was right on the philosophical readership side, I did. My supervisors, a political scientist and a sociologist, though, had less sympathy for this. Why would I need to address such a sophistic philosophical argument in my political science PhD thesis?, they asked me rhetorically. They did not see the relevance of the NIP, which is still held dear by the small scientific community I have been speaking to with my research. As a compromise, I decided to dedicate three pages of my monograph to the NIP and its (non-)relevance for my research.[2] Still, the verdict of my supervisors was unequivocal. To quote from the first review of my thesis, "the discussion of the so-called 'non-identity problem' is unusual and difficult to approach. This excursus of debate seems completely unnecessary" (my translation).

So, what's the matter with the NIP? Originating from the ethics of reproductive medicine, the NIP travelled to other areas that involve concrete future persons. It states that the actions that cause a person's existence cannot be regarded as morally wrong towards this very person, as long as this person has a life that is arguably better than not existing at all in the first place. By extension, it is then said that policies like environmental pollution are not morally wrong towards the members of future generations, in so far as, first, they causally contribute to the genetic make-up of the future persons by somehow affecting the circumstances that determine which specific sperms fertilise which ovules and thereby which persons are going to exist, and second, these persons will live a life worth living, however flawed. It's only this extended NIP I refer to.

Reading these lines, the sympathetic non-philosophical reader may well understand my PhD supervisors and doubt whether the NIP can really be a serious obstacle to the political consideration of future generations. And I tend to agree. It goes against our moral intuition for a reason. Following ethical approaches considering individualised persons only – and thus applying the NIP – future generations would be morally relevant to us only when they would live a life that is worse than being dead (or, to be more precise, not being born). Ethically, this is not a particularly nuanced view. It implies that we could do almost anything today, and that future generations would not be allowed to morally judge our deeds. They would have to accept and support today's status quo in retrospect, since without it they would not exist.

The NIP therefore always sanctifies the current status quo, which is completely arbitrary, not caring for its moral qualities.[3] On the one hand, the NIP, holding to ridiculously long causality chains, supposes that our policies always affect who exactly is going to exist.[4] On the other hand, when we hold to the normative truth that every human life is intrinsically equal in value, an identity-co-creating effect of ours would not even really matter ethically. The NIP gives no guidance on the actually relevant question of how to evaluate the status quo; it does not help us to decide morally what to do for ourselves or for future generations. I therefore call the NIP's moral relevance into question.

If, for the sake of the argument, we assume counterfactually that there is a *tabula rasa* on which there is no current status quo, the NIP would not apply and distract us. We would have to decide by some other moral standard whether to consider the interests of future generations today or not. According to the moral standards with which I am familiar, I am quite sure the answer would be affirmative.[5] Moreover, I suppose that this affirmative argument would be more convincing than the NIP's implicit claim that something is morally OK just because it – descriptively – is the way it is (i.e. the status quo argument), buying into a naturalistic fallacy.

Putting on the more pragmatic political science glasses again, the philosophical curiosity of the NIP also loses its relevance when it comes to the practice of the political consideration of future generations' interests: the person-specific interests of future generations cannot be introduced into the political decision-making process anyway, since the holders of these interests are not yet individualised. We are only able to introduce more general interests that can be plausibly attributed to future generations. As a matter of fact, to a slightly lesser extent this is also true for current citizens: Their interests are usually considered in an aggregated, processed and abstracted way. What matters are not the very persons with their genes, but the fact that these persons are citizens of a certain country, holding equal political rights of being considered and represented. Hence, why the NIP is still sticking to the debate on representing future generations is probably better explained by a philosopher.

Michael Rose is a post-doctoral researcher and lecturer at the Institute of Sustainability Governance, Leuphana University of Lüneburg, Germany. He is one of two guest editors of this IGJR issue.

Notes

1 Schwartz, T. (1979): Welfare Judgments and Future Generations. In: Theory and Decision, 11 (2), 181–194; Parfit, D. (1982): Future Generations: Further Problems. In: Philosophy & Public Affairs, 11 (2), 113–172.

2 Rose, M. (2018): Zukünftige Generationen in der heutigen Demokratie: Theorie und Praxis der Proxy-Repräsentation. Wiesbaden: Springer VS, here 49-52.

3 Rose, M. (2019): All-affected, Non-identity and the Political Representation of Future Generations: Linking Intergenerational Justice with Democracy. In: Cottier, T. / Lalani, S. / Siziba, C. (eds.): Intergenerational Equity: Environmental and Cultural Concerns. Leiden: Brill Nijhoff, 32–51.

4 On an individual level, this claim is questionable for two reasons: first, the negative causal statement "without X, no Y" (X being a specific policy and Y a specific future person) may not be sufficient for a statement of positive causation (X caused Y); second, it ignores the free will of the future person's parents, which may disrupt the deterministic causality chain.

5 Rose 2019 (see footnote 3).

Climate change, intergenerational justice, and the non-identity effect

by Thomas D. Bontly

Abstract: Do we owe it to future generations, as a requirement of justice, to take action to mitigate anthropogenic climate change? This paper examines the implications of Derek Parfit's notorious non-identity problem for that question. An argument from Jörg Tremmel that the non-identity effect of climate policy is "insignificant" is examined and found wanting, and a contrastive, difference-making approach for comparing different choices' non-identity effects is developed. Using the approach, it is argued that the non-identity effect of a given policy response to climate change depends on the contrasting policy. Compared to a baseline scenario without further mitigation, the non-identity effect of choosing to limit climate change to 1.5°C would be highly significant.

Keywords: Climate change, Non-identity problem, Intergenerational justice

Introduction

Many of the questions we confront today have profound implications for the lives and living conditions of future people. Should we reduce carbon emissions? Conserve resources? Pay down the national debt? Curb population growth? Whatever the case may be, it's hard to believe that we could respectably address such issues without paying some attention to interests of future people.

And yet, when we think about justice for future generations, we run up immediately against Parfit's (1984) notorious non-identity problem. In this paper, I take a fresh look at the problem's implications (or lack thereof) for policy responses to anthropogenic climate change. Recently, Tremmel (2018) has argued that the non-identity problem only arises in unrealistic, "fact-insensitive" thought experiments; in the real world, where climate change is an urgent problem, the non-identity effect of our policy choices is "insignificant" (2018: 44) and can be safely ignored. Here I develop a difference-making approach for thinking about the significance of such effects and subsequently argue that the non-identity effects of climate policy are indeed significant. If one wishes to avoid the non-identity problem, one will have to tackle it head on.

The non-identity effect

In what follows, it will help to distinguish the non-identity *problem* itself from what I call, following Broome (2012: 62), the non-identity *effect*. A choice has a non-identity *effect* if it makes a difference to who subsequently comes to exist. Choosing to have one child rather than none has a non-identity effect, as does choosing to have a child with one mate rather than another or even with the same mate at a different time.

The non-identity *problem*, on the other hand, arises when a choice strikes us as morally objectionable, on account of its effects on some person, even though (due to its non-identity effect) that very person would never exist if the choice went another way. For instance,

> *Zika*. A couple living in a region where Zika virus is circulating wishes to have a child. Their doctor advises them to wait a month before conceiving, by which time the risk of infection will have passed. But they are in a hurry and conceive forthwith. The woman is then bitten by a Zika-carrying mosquito; the infection is transmitted to the foetus; the child is born with microcephaly and has reduced quality of life as a result.

Was their choice to conceive forthwith morally objectionable? One tends to think so. That is not to say their choice was wrong, all things considered; perhaps they had good reason not to delay. Still, they had a moral reason to delay, and presumably that reason had to do with the welfare of their child. Their child would have had a better life, one supposes, had they elected to wait.

A choice has a non-identity *effect* if it makes a difference to who subsequently comes to exist. The non-identity *problem*, on the other hand, arises when a choice strikes us as morally objectionable, on account of its effects on some person, even though (due to its non-identity effect) that very person would never exist if the choice went another way.

The problem, of course, is that it would have been a different child having that better life. Had they waited, their actual child would never exist at all. *That* child is no worse off than she would have been had they waited, because her existence, however impaired, is not worse than no existence at all.[1] Nor has that child been harmed, if harming someone requires making her worse off. Consequently, it is difficult to explain what our objection to the couple's choice might be.

But the non-identity effect is not restricted to procreative choices, as Parfit (1976) first pointed out. Indirectly, socio-economic policies have non-identity effects as well, by affecting our lives in countless ways – where and how we live, work, study, play – thereby affecting whether, when, and with whom we have children. Which brings us back to the subject of climate change. Climate change is, as Gardiner (2006) puts it, a severely time-lagged phenomenon, the effects of which are heavily backloaded. The changes we see now – and the consequent casualties[2] – result from CO_2 emissions accumulated over the last two centuries. The impact of current and future emissions, on the other hand, will be felt some time (and, due to the long residence of CO_2 in the atmosphere, for a *long* time) in the future. Most of those impacts will fall on people not yet born.

Based on current projections, furthermore, the impacts are expected to be disastrous. Absent significant mitigation,[3] the Intergovernmental Panel on Climate Change (IPCC) projects global mean surface temperature will rise 3.7°C to 4.8°C over preindus-

trial levels by 2100.[4] Warming of that magnitude would bring "high to very high risk of severe, wide-spread and irreversible impacts globally" (IPCC 2014a: 19), including the loss of species and ecosystems, extreme weather events, significant and irreversible sea-level rise, and, for humans, increased food and water insecurity, disease, dislocation, conflict, and poverty.[5] The good news is that it is still possible to reduce climate change risks through concerted efforts at mitigation (IPCC 2014c:14). The bad news is that doing so will be extremely expensive; no doubt many other projects and opportunities would have to be sacrificed.[6]

Hence the question: do we owe it to future people, as a requirement of justice, to act now to prevent these bad effects from occurring? Many think so.[7] But now we must confront the non-identity problem. Since the choice to mitigate climate change (or not) will affect who later exists, we cannot claim that future people will be individually better off if we reduce our emissions. *Other* future people would enjoy a more stable climate and better living conditions if we reduce emissions, but not *the same* future people.[8] Nor will future individuals be able to claim, if we fail to mitigate climate change, that they had a right to inherit a better world, for we could not have left *those* future people a better world (Broome 2012: 62). How then can it be maintained that we have an obligation to future people to act?

It seems, therefore, that the non-identity problem has the potential to undermine justice-based arguments for mitigation. For similar reasons, it may undermine arguments of historic justice that inhabitants of industrialised countries, having benefited from past industrialisation, ought now to bear the burdens of mitigating and adapting to climate change. Thanks to the non-identity effect, however, it is not true that inhabitants of industrialised countries are better off than they would have been had industrialisation not occurred; without industrialisation, *those* individuals would not exist (Caney 2005: 757-758).

Can we dodge the problem?

Thus far, we have seen that the non-identity problem has the potential to undermine two familiar arguments about climate justice. Of course, if it could be shown that the non-identity problem rested on some error, those arguments might hold up rather well. I shall return to that possibility below. First, though, I would like to consider three attempts to sidestep the non-identity problem by arguing that its implications for policy in this area are quite limited.

One way to evade the non-identity problem would be to appeal to moral obligations which are not duties of justice. According to Broome (2012: 52-53), duties of justice are owed to particular people, whereas duties of goodness are owed to no one in particular. Our governments, furthermore, have a general obligation of goodness "to promote the flourishing of their people" (65), giving them a reason, quite apart from justice, to mitigate climate change. However, shifting our focus from justice to beneficence does not render the non-identity problem moot. First, when justice and beneficence conflict, justice usually takes priority. If we owe it to current people to help them adapt to climate change, the idea of mitigating climate change in order to promote future flourishing would have to take a backseat; whereas if we owe it to future people to mitigate climate change as a duty of justice, their claim may win out. Furthermore, our governments are apt to interpret the duty to promote the flourishing of "their people" rather narrowly, to include only those who might vote for them in the next election. Promoting the good of future people, while nice, seems supererogatory – unless, of course, one owes them something as a duty of justice.

A second attempt to evade the non-identity problem might point out that the negative effects of climate change are not deferred as far into the future as scientists used to think. Climate change is already killing people and will almost certainly make life increasingly miserable for a great many who already exist.[9] Today's children, after all, can reasonably expect to see the year 2100, which is the endpoint for most IPCC projections. Since those children already exist, our duty to mitigate climate change for their sake is not undermined by the non-identity effect, which only affects duties to future people.

A second attempt to evade the non-identity problem might point out that the negative effects of climate change are not deferred as far into the future as scientists used to think. Let us grant that we owe it to our existing children to mitigate climate change. Still, the non-identity problem is not a moot point as it bears on the need to weigh the costs and benefits of mitigating climate change against those of adapting to it.

Let us grant that we owe it to our existing children to mitigate climate change. Still, the non-identity problem is not a moot point as it bears on the need to weigh the costs and benefits of mitigating climate change against those of adapting to it. As Moellendorf (2015: 174) observes, adaptation policies can benefit those alive now as well as future people, whereas mitigation mostly benefits future generations – unless, that is, the non-identity effect means that we cannot benefit future people at all. And if mitigation would benefit practically no one, surely we ought to direct our resources toward adaptation instead. So, even if we have ample reason to worry about climate change for the sake of current people, the non-identity effect still has implications for the appropriate policy response.

Is the effect insignificant?

A third and I think more interesting reason why the non-identity effect might be irrelevant to climate policy is suggested by Tremmel (2018). As he sees it, the non-identity effect only matters in unrealistic, "fact-insensitive" thought experiments where the causal factors at play are artificially expanded. In the real world, where climate change is an urgent problem, the non-identity effect of policy choice is "miniscule" and "insignificant" (44) and can be safely ignored.

Why insignificant? As Tremmel points out, government policies aimed at controlling emissions aren't the only factors affecting whether, when, and with whom people make babies – far from it. A myriad factors play a role: college admission policies, dating apps, and the closing times of bars play, in his view, just as big a role (2018: 46), to say nothing of such things as trade policy, tax incentives, housing prices, war, financial deregulation, and on and on. But the more factors there are, the less any one seems to matter: "If the number of factors that influence who will be meeting, mating and making children with whom converges toward infinity, the influence of each particular factor converges towards zero" (46).

Let us grant that a great many factors affect who later comes into existence. It does not follow, however, that the effect of any one such factor is small or insignificant. We can see this from classical physics. According to Newton's laws, the acceleration a particle undergoes depends on its mass and on the force applied to it, and every particle with mass exerts some gravitational force on every other. Thus, the number of factors influencing the motion of any one is potentially infinite. Does it follow that the influence of each must approach zero? No. Since gravitational force is proportional to mass and inversely proportional to the square of distance, the influence of nearby, massive particles is bound to be significant by comparison to the rest, no matter how many there are.

While that suggests that Tremmel's argument is unsound, classical physics is a poor model for the non-identity effect. Physical forces obey Mill's (1858) principle of the composition of causes: the result of two forces is just the sum of each were it acting alone. Consequently, we can ask "How much of A's acceleration is due to B?", because force is a quantity, and quantities can be aggregated. It's like asking how much of one's martini is gin and how much vermouth; forces, like spirits, can be aggregated.

But the non-identity effect does not work that way. The question "How much of the population of the future is due to climate policy?" makes little sense, because policies don't contribute discrete sets of individuals; nor do dating apps, bar times, or banking regulations. We cannot coherently ask who would exist in the future if climate policy (or dating apps, etc.) were the only "force" at work, for such a situation is inconceivable.

So, Tremmel's attempt to sidestep the non-identity problem seems unworkable, but the analogy with physics suggests a new question: how should we think about the contributions of different identity-affecting factors?

A difference-making account of causal significance

For our purposes, a better model than physics is biology. Sometimes we want to ask whether a given trait, e.g. height, depends more on the organism's genes than on its environment. But we do not suppose that genes and environment make separate contributions which can be aggregated like forces (Sober 1988). It makes no sense to ask how tall someone would have been if genes had acted alone, or if environment had acted alone. Genes cannot act without environment, nor environment without genes; both are required for phenotypic effects (Ariew 1996).

Still, there are ways to compare the effects of genetic and environmental factors. One way is to ask, of a trait in a given population, whether genes or environment make more of a difference. That is the intuitive idea behind the statistical technique known as *analysis of variance* (ANOVA). To illustrate briefly, suppose we have a number of plant seedlings representing three genotypes (G1, G2, G3) of the same species.[10] We plant them in separate plots, varying only the amount of water they receive (low, medium, high). We then measure their heights at maturity, average them, and plot as a function of the other two variables, as in Table 1.

	W=High	***W=Medium***	***W=Low***	***Marginal average***
G1	85	55	25	55
G2	80	50	20	50
G3	75	45	15	45
Marginal average	***80***	***50***	***20***	
				Grande mean = 50

Table 1: Fictional data for plant heights and water-breed combinations

The variance, intuitively, is the extent to which the values in the nine cells differ from the grand mean. The question ANOVA answers is: which variable accounts for more of the variance? (In this case, the answer is W.)

Four points about the statistical analysis of variance are relevant to our discussion. First, which factor accounts for more of the variance is relative to a population. In this population, W's value makes a bigger difference to height than G's. In a population containing other variants (say, G3, G4, and G5), G(enotype) might account for more variance than W(ater).

Second, statistical difference-making is *contrastive*. The difference a given value of G (say, G1) makes to H depends on what other value(s) of G we contrast it with, or what we take as the "baseline". G's being G1 rather than G2 makes a difference of 5 units, whereas G's being G1 rather than G3 makes a value of 10 units. So, our choice of contrast matters.

Third, nothing here turns on how many different factors are at play. Presumably, a myriad of factors, both environmental and genetic, influence height; even so, it would not follow that water's effect on height is insignificant (though we might find it to be so in some populations).

Fourth, ANOVA is a population-level analysis, inapplicable to a singleton case. In a population of one, there is no variance to analyse. And that is a problem for us, because in non-identity cases, we really are dealing with a population of one – not of one person, necessarily, but a population of one population. There is only one human population, and we are wondering about the effect climate policy has on its composition. If we had a bunch of populations, all genetically identical, we could "plant" them (so to speak) and subject them to various manipulations. But we do not.

Still, we can pretend. Imagine, as a variant on Putnam's (1975) Twin Earth case, that we had the god-like power to make hundreds of Twin Earths, each a molecule-for-molecule duplicate of the Earth as it is right now, right down to the DNA molecules of all 7 billion of us. Then we divide the many Twin Earths into distinct lots, subjecting each lot to a distinct set of manipulations. Some Twin Earths we subject to a mix of policies aimed at keeping warming by 2100 below 1.5°C; others we subject to a mix of policies aimed at keeping warming below 2°C; others receive no additional mitigation. We can manipulate other factors as well, e.g., bar times. Then, at various points in the future (say, 30-year intervals), we check to see if the "same people" (genetic twins) are born.[11]

Obviously, we cannot do any of these things, except in thought, which brings me to a fifth point.

In the singleton case, the relevant notion of difference-making is not statistical; it is counterfactual (Sober 1988). To what extent is Giorgione's height due to his environment? The only way I can see to answer that question is with a counterfactual: *to the extent that his height would have been different had he the same genes but been raised in a different environment*. As with statistical differ-

ence-making, furthermore, counterfactual difference-making is contrastive: that is, we must specify in what other environment(s) Giorgione would have been raised if not his actual. If he was raised in a high-nutrition environment, the interesting contrast might be a low-nutrition environment, in which case (perhaps) he would have been far shorter; then his environment made the difference. Or perhaps he would have been just as tall, in which case his environment made little difference. Whichever the case, contrastivity seems unavoidable.

In the singleton case, the relevant notion of difference-making is not statistical; it is counterfactual. Whichever the case, contrastivity seems unavoidable.

Why the non-identity effect of climate policy is significant

Now, I suggest that we frame our question about the non-identity effect of climate policy in the same terms. Consider the most ambitious goal set forth in the 2015 Paris Agreement, that of limiting the increase in global average temperature to no more than 1.5°C, and suppose that we have some idea of the policy regime (a mix of carbon taxes, infrastructure investments, and so on) needed to achieve it. How significant would the non-identity effect be? What difference would it make to "the phonebook of the future" (in Tremmel's apt metaphor)?

It depends, I submit, on what policy(s) we select as the alternative. One alternative is the "business as usual" or "baseline" scenario involving no mitigation measures beyond those in place; another is the slightly less ambitious goal highlighted in the Paris Agreement of holding warming by 2100 below 2°C. While 0.5°C does not sound like much difference, IPCC (2018) finds major differences in what it would take to achieve them. Based on current models, the 2°C goal would require emissions to decline 25% by 2030 and reach net zero by 2070, whereas 1.5°C would require emissions to decline 45% by 2030 and reach net zero by 2050. As IPCC (2018: 15) puts it, in comparison to 2°C, limiting warming to 1.5°C "would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems" on an unprecedented scale and "imply deep emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options".[12]

Now, the first point I want to make is that the difference between these "rapid and far-reaching transitions" required for 1.5°C and the somewhat less rapid but still far-reaching transitions required for the 2°C goal would make one sort of difference to future population. By contrast, the difference between the 1.5°C scenario *and the baseline* would be quite another. Of course, we cannot say exactly how much the future population would differ in either case, much less which individuals would exist. But there is reason to think that, compared to a policy of business-as-usual, the adoption of policies consistent with 1.5°C of warming would significantly alter the details of most people's lives. If so, their future populations would in all likelihood diverge rapidly, with entirely different people being born in fairly short order.

There are several reasons to expect rapid divergence. First, economists agree that any serious attempt to reduce emissions would require putting a price on carbon emissions; the steeper the target reduction, the higher the price would have to be initially and the more rapidly it would have to increase. Under a less ambitious target, we might limit the impact of carbon pricing on people's lives by rebating some or all of the revenues back to taxpayers, or by using it to address poverty. But if we need to reduce emissions by 45% by 2030 and reach net zero by 2050, it's plausible that most if not all of the revenue would have to flow towards infrastructure, research and development. Compared to baseline, therefore, those in a 1.5°C world would for all intents and purposes live in vastly different economies; they would attend different schools, enter different careers, live in different places, travel by different means, and meet different people, all of which would subtly affect the timings of conceptions.

A further difference between the baseline and 1.5°C target scenarios involves climate change itself, which has add-on non-identity effects. Under the 1.5°C target, the climate will warm less rapidly and less overall compared to baseline, reducing both risk and the cost of adaptation in decades to come. There would be many fewer climate refugees than under baseline. These differences would further affect people's lives and indirectly their procreative choices.

A third difference between the baseline and 1.5°C target scenarios involves social unrest. We have already seen, in the Yellow Jacket movement in France, how one country's quite modest attempts to curtail emissions by raising fuel taxes can lead to unrest, and unrest has non-identity effects of its own. Unrest brings protesters together, but it can also drive neighbours apart. It brings some into the street while leading others to stay home, all of which affects who meets and ultimately mates with whom and when. Under the baseline scenario, too, we should expect social unrest, though in different communities and with different results. Under baseline, the protesters would be primarily young people and progressives (in affluent countries in the Global North); under 1.5°C, the protesters are more likely to be older middle-class men unhappy with the added cost of living.

A fourth difference between baseline and 1.5°C scenarios is a difference in our values. Barring technological miracles, rapid decarbonisation may not be achievable in capitalist democracies, where economic growth is normative, multinational corporations hold immense power, economic inequality runs high, and the accumulation of wealth and material goods are employed as the measure of a life. To rapidly transform society, therefore, we likely must simultaneously transform our media, our schools, our politics, and our values. And since values guide choices, our children will likely make different procreative choices, compared to baseline, in part because of their different values.

Barring technological miracles, rapid decarbonisation may not be achievable in capitalist democracies, where economic growth is normative, multinational corporations hold immense power, economic inequality runs high, and the accumulation of wealth and material goods are employed as the measure of a life.

Compared to baseline, therefore, one should expect the adoption of policies aimed at 1.5°C of warming to have a large non-identity effect; due to the far-reaching changes needed in society, quite possibly no one's life would be quite the same. In terms of the analogy to classical physics from above, adopting such policies would be like adding a distant but extremely massive object to our solar system: the effect on other bodies would be relatively indi-

rect, but it would subtly affect the trajectories of them all. Compared on the other hand to policies aimed at 2°C, the non-identity effect of 1.5°C would be smaller but still, due to the shorter time to reach net zero, quite pronounced.

The outlook

In this paper, I have argued that we cannot avoid the non-identity problem in climate ethics by supposing that the non-identity effects of our various policy options would be insignificant or otherwise beside the point. Hence, if we are persuaded that unmitigated CO_2 emissions would do future people an injustice, we must attack the problem head on: we shall have to show that an act can harm or otherwise wrong someone who would never exist but for that very act.

While I lack the space to defend such an approach, I shall briefly argue that one of the assumptions underlying the problem is quite vulnerable and suggest an improvement. This is the assumption that *an act cannot harm someone if it does not make her worse off than she would otherwise have been*. Although there is a connection between harming and counterfactual difference-making, it is not as simple as the italicised formula would indicate. We can see this by considering a different thought experiment, one involving causal preemption:

Thirsty Traveller. A traveller, T, sets out on a trip across the desert. T has two enemies, A and B. A puts a deadly poison in T's reserve can of drinking water. Then B, unaware of the poison, drills a hole in the bottom of the can. By the time T needs the reserve, the can is dry; T dies in the desert.[13]

In this case, *someone* harmed T, and it certainly wasn't A. After all, A's poison never touches T's lips; his attempt on T's life is cut short. We can agree that A wronged T by *trying* to harm him, but it also seems clear that B wrongs T in a more direct sense – by actually harming him. And if B harms T, then harming someone cannot require making that person worse off. For in this case, T winds up no worse off than he would have been if B hadn't drilled his little hole (Bontly 2016: 1237).

Preemption cases suggest that we need to rethink the counterfactual account of harm. As a first pass, consider a simple (though ultimately inadequate) causal account of harm, where an action harms someone if it actually causes something to occur that is worse for that person, i.e. if it produces an effect that person would be better off without. In *Thirsty Traveller*, due to the preempted backup, B's drilling the hole does not make T worse off than T would otherwise have been. However, B's drilling does *cause* something – viz. T's death – which leaves T worse off than he would otherwise have been. Insofar as preemptive harms are concerned, thus, the simple causal account appears to improve upon the familiar counterfactual account of harm.

Similarly, in the case of climate change, the simple causal account appears to vindicate the commonsense view that our choices can harm future people, even those who would never exist but for those choices. To keep things manageable, let us focus on a dichotomous choice: either to pursue mitigation policies sufficient to limit warming to 1.5°C (henceforth, "Mitigation"), or to continue our reliance upon fossil fuels without any attempt to mitigate ("Baseline"). Suppose now that we choose Baseline, extreme warming ensues as predicted, and millions of people in the 22nd century suffer or die prematurely from climate-related causes. Let us assume, furthermore, that none of these millions of people would ever exist if we chose Mitigation, due to the non-identity effect, though other people would. A simple counterfactual theory of harm tells us, counterintuitively, that Baseline does not harm those future people, for they themselves are no worse off than they would be under Mitigation. The causal account, on the other hand, says just the opposite: our choice harms the future people, because it causes extreme warming, which is worse for them than the lesser warming under Mitigation would have been.

So, a causal account of harm can explain why there is at least a *pro tanto* objection to the Baseline choice, that is, why it is objectionable in some respect or to some extent. By that same token, however, it may seem on a causal account that the *pro tanto* objection is overridden by a greater *benefit* we give to those same people: namely, the benefit of existence. For we may assume that existence is on balance good for these future people – that the good they experience in their lifetimes outweighs the bad, despite the ill effects of unmitigated climate change. And, of course, these future people would receive none of these benefits if we had not chosen Baseline, for then they would not exist at all. Thus, it can be argued that, on a causal account, our choice benefits the future people more than it harms them, leaving it unclear why that choice is objectionable, all things considered.

However, a subtle amendment to the causal account solves the problem. On the view I favour, harming and benefiting are not just causal notions; they are *contrastive* notions. That is, the claim that some action, x, harms a particular person must be understood as the claim that the performance of x *rather than some specific alternative(s) x** harms that person, where x* is the act (or set of acts) the agent would or might have done instead. Then the contrastive account of harming (and benefiting) runs as follows:

The performance of x rather than x* harms (benefits) someone, S, if and only if (i) there are events e and e* such that x rather than x* causes e rather than e*, and (ii) e is worse (better) for S than e* would have been (Bontly 2016: 1246-1247).

Now consider the choice between Baseline and Mitigation. Just let e be extreme warming of (say) 4°C or more, and let e* be warming of only 1.5°C. By hypothesis, 4°C is worse for those people than 1.5°C would be, and Baseline rather than Mitigation causes warming of 4°C rather than 1.5°C. So, our choice does indeed harm the future people.

Furthermore, there is no reason, on the contrastive account, to think that our choice benefits the future people in causing them to exist. For it to benefit them, there would have to be some e and e* such that (i) Baseline rather than Mitigation causes e rather than e*, and (ii) e is better for the future people than e* would have been. One can easily find pairs of events that satisfy one constraint or the other, but no events in our scenario seem to satisfy both conditions simultaneously. For instance, our choosing Baseline over Mitigation causes one group of future people to come to exist rather than another. But is it better for these future people that they exist rather than some other future people? No. A person isn't better off in worlds where she exists than in worlds where she never exists at all. Nor is she worse off or equally well off. Such comparisons presuppose that the person has a welfare in both worlds, and that presupposition is not satisfied in this case.

On the other hand, assuming that our future people have lives that are on balance good ones, there must surely be events in their lives which satisfy (ii). The question is whether our choice causes such events to occur rather than alternatives that would be worse

for them. Suppose that one of these future people is a faculty member, and that her receiving tenure is better for her than her being denied tenure would have been. But choosing Baseline over Mitigation does not cause our future professor to receive tenure rather than to be denied tenure, nor does it clearly cause her to have any other good rather than to lack it (Bontly 2016).
These claims require further defence than given here, but I am hopeful that a contrastive account of harm will deliver us from the non-identity problem.

Notes

1 Nor, presumably, is their actual child better off than she would have been had they waited. A person is better off in scenario A than in scenario B only if her wellbeing in A would be higher than in B. Since a person has no wellbeing in worlds where she has no being, one cannot (I conclude) be better or worse off than if one never existed. For a contrasting view, see Roberts (2003).
2 Estimates of deaths from climate change vary. One oft-cited number comes from the World Health Organization (2009: 24), which estimated that climate change was already responsible for 140,000 excess deaths annually by the year 2004.
3 "Mitigation" in this context refers to reducing CO_2 emissions or enhancing CO_2 sinks in order to stabilise the climate; "adaptation" means reducing human vulnerability to risks from a changing climate.
4 The range of 3.7°C to 4.8°C assumes a median estimate of climate sensitivity to increased levels of greenhouse gas. The possible range is reported to be 2.5°C to 7.8°C (IPCC 2014a: 8).
5 These and other risks are detailed in IPCC 2014c, especially Part B ("Future Risks and Opportunities for Adaptation").
6 Estimates of the cost of mitigating climate change depend partly on how much warming we are willing to accept. According to the IPCC (2018), limiting warming by 2100 to 1.5°C is apt to be considerably more costly than limiting warming to 2°C; on the other hand, adapting to 1.5°C is apt to considerably less costly than adapting to 2°C. Much controversy surrounds attempts to calculate costs and benefits of climate change; see Broome (2012), especially Chapters 3, 8, and 9, and the references given therein.
7 See, for instance, most of the papers in Moore and Nelson (2010). In their introduction to the volume, Moore and Nelson write "[w]e have a moral obligation to avert harms to the future, so as to leave a world as rich in life and possibility as the world we inherited."
8 Arguably, there are some future people, especially in the near future, who would exist whether we mitigate climate or not, for the non-identity effect is time-lagged (Parfit 1976: 102). However, those people are unlikely to benefit much from mitigation, because the effects thereof (in terms of avoided warming) are also time-lagged (USGCRP 2017: 394). Tebaldi and Friedlingstein (2013) find that it would take 25–30 years for the effects of mitigation to become discernible. Likewise, the IPCC (2014b: 9) projects a similar increase in global temperature across all emission scenarios over the next few decades. It is plausible, therefore, that the time-lags of non-identity and mitigation would approximately offset. I thank an anonymous referee for raising the issue.
9 For instance, the World Health Organization estimates that global warming would contribute an additional 250,000 deaths annually by 2030 (Hales et al. 2014).
10 The example is borrowed from Northcott (2008), who adapted it from Lewontin (1974).
11 One interesting question we might ask is whether Twin Earths in the same "treatment group" (i.e. the same cell in the table, subjected to the same settings of the various exogenous variables) wind up with the "same" individuals (i.e. twins) being born? To put it another way, how much of the variance is due to random chance, or factors for which we cannot control? Perhaps quite a bit.
12 More precisely, these are the requirements to keep the temperature increase below 1.5°C "without overshoot". IPCC (2018) also explores pathways where we temporarily exceed 1.5°C above preindustrial average and then draw down by means which are technically possible but currently unavailable.
13 Thirsty Traveller is adapted from Mackie (1974: 44), who offers it as a counterexample to a simple counterfactual account of causation.

References

Ariew, André (1996): Innateness and Canalization. In: Philosophy of Science, 63 (5), 19-27.

Bontly, Thomas (2016): Causes, Contrasts, and the Non-identity Problem. In: Philosophical Studies, 173 (5), 1233-1251.

Broome, John (2012): Climate Matters: Ethics in a Warming World. New York: W. W. Norton & Company.

Caney, Simon (2005): Cosmopolitan Justice, Responsibility, and Global Climate Change. In: Leiden Journal of International Law, 18 (4),747-775.

Gardiner, Stephen (2006): A Perfect Moral Storm: Climate Change, Intergenerational Ethics and the Problem of Moral Corruption. In: Environmental Values, 15 (3), 397-413.

IPCC (2018): Summary for Policymakers. In: Global Warming of 1.5°C. Edited by Masson-Delmotte, V. et al. https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_Low_Res.pdf. Viewed 15 December 2019.

IPCC (2014a): Summary for Policymakers. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Edited by: Edenhofer, O. et al. Cambridge: Cambridge University Press

IPCC (2014b): Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Edited by Pachauri, R.K. / Meyer, L. A. Geneva: IPCC.

IPCC (2014c): Summary for Policymakers. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Edited by Field, C.B. et al. Cambridge: Cambridge University Press.

Lewontin, Richard (1974): The Analysis of Variance and the Analysis of Causes. In: American Journal of Human Genetics, 26(3), 400–411.

Mackie, J. L. (1974): The Cement of the Universe. Oxford: Oxford University Press.

Mill, John Stuart (1858): A System of Logic. New York: Harper & Brothers.

Moellendorf, Darrel (2015): Climate Change Justice. In: Philosophy Compass, 10 (3), 173-186.

Moore, Kathleen / Nelson, Michael (2010): Moral Ground: Ethical Action for a Planet in Peril. San Antonio, TX: Trinity University Press.

Northcott, Robert (2008): Can ANOVA Measure Causal Strength? In: The Quarterly Review of Biology, 83 (1), 47-55.

Parfit, Derek (1976): On Doing the Best for Our Children. In: Bayles, Michael D. (ed.): Ethics and Population. Cambridge, MA: Schenkman Publishing Company Inc., 100–115.

Parfit, Derek (1984): Reasons and Persons. Oxford: Oxford University Press.

Putnam, Hilary (1975): The Meaning of "Meaning". In: Minnesota Studies in the Philosophy of Science, 7, 131-193.

Roberts, Melinda (2003): Can It Ever be Better Never to Have Existed at All? Person-Based Consequentialism and a New Repugnant Conclusion. In: Journal of Applied Philosophy, 20 (2), 159-185.

Sober, Elliott (1988): Apportioning Causal Responsibility. In: The Journal of Philosophy, 85 (6), 303-318.

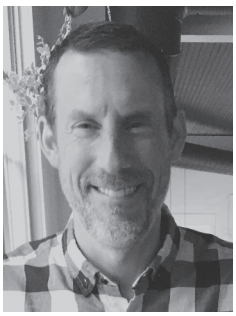
Tebaldi, Claudia / Friedlingstein, Pierre (2013): Delayed Detection of Climate Mitigation Benefits Due to Climate Inertia and Variability. Proceedings of the National Academy of Sciences, 110 (43), 17229-34.

Tremmel, Jörg (2018): Fact-insensitive thought experiments in climate ethics – Exemplified by Parfit's non-identity problem. In: Jafry, Tahseen (ed.): The Routledge Handbook of Climate Justice. London: Routledge, 42-56.

USGCRP (2017): Climate Science Special Report: Fourth National Climate Assessment, Vol. 1. Edited by Wuebbles, D., et al. Washington, DC: US Global Change Research Program.

WHO (2014): Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s. Edited by Hales, S. et al. Geneva: 2014.

WHO (2009): Global health risks: mortality and burden of disease attributable to selected major risks. Edited by Mathers, C. / Stevens, G. / Mascarenhas, M. Geneva: 2009.



Thomas D. Bontly is an associate professor of philosophy at the University of Connecticut. He has research interests in the philosophy of mind, philosophy of science, ethics, and environmental ethics. His current research focuses on the non-identity problem.

Contact details:
Thomas D. Bontly
Philosophy Department, U-1054
University of Connecticut
Storrs, CT 06515
USA
E-Mail: thomas.bontly@uconn.edu

The non-identity problem in climate ethics: A restatement

by Jasmina Nedevska

Abstract: *This article justifies and restates the non-identity problem (NIP) in relation to climate change. First and briefly, I argue that while there is often good reason to set the NIP aside in practical politics, there can be areas where a climate NIP will have practical implications. An instructive example concerns climate change litigation. Second, I argue that there are three particular circumstances of a climate NIP that may set it apart from the more established NIP in bioethics. These differences regard interaction, numbers, and agency respectively. Third, I discuss the premises and conclusion of a climate NIP, modifying an account in bioethics by David Boonin (2014).*

Keywords: Non-identity problem, Climate change, Intergenerational duties, Environmental duties, Derek Parfit

This article justifies and restates the non-identity problem (NIP) in relation to climate change. Some climate ethicists who engage with the NIP assume that the problem is an obstacle to convincing people to live by intergenerational climate duties. The idea seems to be that calls for long-term climate measures lose force if the argument does not fully stand up to scrutiny. Others, however, point out that the NIP, being a purely philosophical problem, has no implications for individual moral practice or common policy. Indeed, the latter theorists claim, treating the problem as if it had such implications is counterproductive (Tremmel 2018).

My point of departure occupies a middle ground. While there is often good reason to set the NIP aside in practical politics, there can be unforeseen and/or delimited areas where a climate NIP (C-NIP) will have practical implications. As I argue below, a recent case of climate change litigation may serve as an instructive example.

The purpose of this article is to facilitate further discussion, among climate ethicists and others, on the components and possible implications of the non-identity problem. The paper is structured as follows.

In the upcoming section, I describe how an established concept of harm, and its inapplicability, had significant impact on the judge's reasoning in the case *California vs. BP* (2018). With regard to future people, I argue, a similar inapplicability could stem from non-identity.

Thereafter, I describe how the *circumstances* of a climate NIP will often differ from the more established NIP in bioethics. I identify three important differences, regarding *interaction*, *numbers*, and *agency*, respectively. Because of these differences, a climate NIP can be seen as more difficult to handle.

Finally, I map out and discuss the *premises* and *conclusion* of the NIP in a climate version, modifying an account in bioethics by David Boonin (2014). Following Tremmel (2018), I refer to this problem as the Climate-NIP (C-NIP for short).

Climate change litigation

In the case *California v. BP*, the cities of Oakland and San Francisco ("the Cities") turned to the United States District Court for the Northern District of California, filing a lawsuit against BP and four other energy companies: Chevron, ConocoPhillips, Exxon and Royal Dutch Shell. Collectively, these companies are responsible for over 11% of the accumulated pollution of carbon dioxide and methane since the Industrial Revolution; they are also deemed the world's five largest fossil fuel producers at present. According to the plaintiffs, the energy companies should be held liable for a continued marketing of fossil fuels long after learning that such fuels contribute to climate change. The Cities required, in this vein, that the companies be directed to fund a programme to build sea walls and other infrastructure to protect persons and property from global warming-induced harm (Seinfeld 2018: 25, 28).

District Judge William H. Alsup did not consider the case a matter for state courts and dismissed it for this reason. At first glance, this simply means that the case will be tried within the US federal court system instead. However, the crucial criterion for Judge Alsup concerned the applicability of a concept of harm. "For a court to exercise specific jurisdiction over a non-resident defendant," the judge reasoned, pointing to precedent, "the claim must be one which 'arises out of or relates to' the defendant's forum related activities" (California v. BP 2018: 5). This means that if the Court of California is to judge in the case involving the energy companies, the residents of the Cities must show that climate change (or their own climate change-related needs) "arises out of or relates to" the companies' marketing of fossil fuels *in California*.

While there is often good reason to set the NIP aside in practical politics, there can be unforeseen and/or delimited areas where a climate NIP will have practical implications.

The Cities here pointed to "significant activities of defendants' alleged agents and subsidiaries – such as the transportation and sale of gas to California consumers – which amount to the purposeful direction of activities towards the forum." Alsup observed, however, that it is "manifest that global warming would have continued in the absence of all California-related activities of defendants. Plaintiffs have therefore failed to adequately link each defendants' [sic] alleged California activities to plaintiffs' harm" (California v. BP 2018: 5). The plaintiffs' problem was not that they needed to show that the relevant companies alone gave rise to global warming. Instead, the Cities were required to show that the companies' conduct is a "but for" cause of their harm. Alsup argued further: "nowhere do plaintiffs assert that sea rise would not have occurred had any defendant reduced or refrained from fossil fuel production in California (or elsewhere in the United States)" (California v. BP 2018: 7).

This is not the same problem as the non-identity problem. The example raises questions regarding imperceptible consequences and collective action. The non-identity problem, on the other hand, is not fundamentally due to our incapacity to consider small contributions to harm but to future persons' lack of fixed identities. However, the example goes to show that philosophical obstacles to apply a concept of harm may matter in practice and with regard to climate change. Further, non-identity seems to have a similar implication as the collective action in the example above: it renders an established notion of harm inapplicable. Hence, given that a court case concerns distant future people, non-identity may affect, for instance, which forum and what verdicts we can expect. Below, I briefly introduce the non-identity problem.

The non-identity problem

The philosophical problem referred to as the non-identity problem seems to show that there are no intergenerational duties with regard to the climate.

The problem was identified by an increasing number of scholars in the late 1970s and early 1980s. In *Reasons and Persons* (1984), Derek Parfit would give the problem a thorough and influential treatment. A basic observation made by the non-identity scholars is that personal identity depends on by whom and when a person is conceived. In turn, who meets whom and when procreation takes place depend on a countless number of actions, including a society's choice to live sustainably or not. Future persons cannot, therefore, be rendered worse off by our unsustainable living. Rather, the particular people who will exist in the future will do so as a result of how we decide to live our lives. Moral theory, as well as common sense, typically relies on person-affecting reasons – an act is seen as being morally wrong if it renders another person worse off in some way. In this case, however, such a person-affecting view seems to imply, counterintuitively, that it would not be morally wrong to leave behind an unsustainable climate. This would mean that there are no intergenerational climate duties.

Philosophical obstacles to apply a concept of harm may matter in practice and with regard to climate change. [G]iven that a court case concerns distant future people, non-identity may affect, for instance, which forum and what verdicts we can expect.

Future people's non-identity, many scholars insist, should make no difference to our judgement in this and similar cases. For around four decades, various moral arguments have, therefore, been tried as an objection to intergenerational wrongs. Some scholars aim to keep a person-affecting view in these efforts. Others consciously assume an alternative, impersonal view. Predominantly, attempts of the latter sort have been utilitarian in character. According to utilitarianism, the right act is the one that produces the most well-being, summed impersonally across all the people affected. This sort of approach can likewise lead to counterintuitive conclusions, including the so-called repugnant conclusion, given that different acts also produce different numbers of people (Parfit 1984: ch. 17). So far, no suggestion of how to approach non-identity seems to be considered perfect. Using Parfit's expression, we are still looking for "Theory X". Theory X would solve the non-identity problem or circumvent the non-identity problem without running into other problems, such as the repugnant conclusion.

While some dismiss the practical relevance of the problem, typically in connection to climate change, I have here suggested that there is reason to take the non-identity problem into some account with regard to the climate. In the following, I provide a more detailed restatement of the non-identity problem in relation to climate change.

The circumstances of the C-NIP

In the upcoming sections, I identify particular circumstances that will often set the C-NIP apart from a more discussed version in bioethics. First, however, we shall understand the more established version of the non-identity problem better.

Consider the frequently employed and recast example of Parfit's, referred to as the "14-year-old girl". The 14-year-old is assumed to want a child; she is not yet pregnant but wishes to conceive. The girl is told she should wait and have the child later: "that would be better for him," her close ones claim, "since you would be able to give him a better start in life" (Parfit 2011: 220). Nonetheless, she goes ahead and has a child, and gives him a bad start in life.

Can we uphold, the non-identity literature asks, that she did anything wrong? Stipulate further that neither the young mother herself nor the rest of society suffers from the decision. Although we may still want to say that she did something wrong vis-à-vis her child, we do not seem to be in a position to claim that her decision was in fact worse for her child. A reason behind this is that the child's very identity depends on when he was conceived. "If [the 14-year-old] had waited," Parfit points out, "this particular child would never have existed. And, despite its bad start, his life is worth living" (Parfit 1984: 359). Since the child is not worse off than he would otherwise have been, it is hard to say that he has been harmed by his mother's act. It then proves to be difficult to say that the 14-year-old did anything wrong or even objectionable with regard to how her child's life turned out.

In important respects, the climate case may differ from the case of the 14-year-old. I bring up three possible differences here, regarding *interaction*, *numbers*, and *agency*, respectively.

The non-identity problem is conceived of as a problem because person-affecting assumptions, which many hold to be true, bring one to a conclusion that seems false. In order to account coherently for intergenerational climate duties, one would need to show that one can deal with this problem. In one way or another, one will need to come up with an argument where identity makes no difference to the conclusion.

Below, I state some central respects in which the climate case *differs* from that of the 14-year-old girl. The differences shed light on particular requirements that climate change puts on an account of intergenerational duties.

Parfit refers to a related example as "risky policy". We could here think of the risky policy as high emissions of greenhouse gases (GHG), which cause climate change. This may convey rising sea levels, extreme weather phenomena or other dangerous events, of which some will happen in a distant future. These are events we see as harmful if or when they strike contemporary people. There is a risk, in this case, that a future catastrophe or degradation will have a negative effect on the quality of future people's lives. At the same time, society's choice to emit GHG for various purposes

also affects to some extent who will live in the (further) future. We thus seem unable to say that the future persons whose living conditions will be affected negatively by high emissions will thereby be made worse off. Our *prima facie* inability to appeal to a notion of harm thus makes the environmental case similar to that of the 14-year-old girl.

Yet, in important respects, the climate case may differ from the case of the 14-year-old. I bring up three possible differences here, regarding *interaction*, *numbers*, and *agency*, respectively.

Interaction

First, the present generation will experience *no interaction* with the future generation concerned. The choice of the 14-year-old has been described as a "direct" case, as her choice "directly determines which particular person will exist after the choice is made" (Boonin 2014: 5). Contributing to climate change, on the other hand, has been described as an "indirect" case, in which a choice is part of "a complex chain of events that eventually have an equally decisive effect on which particular people exist after the choice is made" (Boonin 2014: 5). This is connected to the fact that climate change is caused by a collective agent, or the joint behaviour of many individual agents, to which I return below. But the causal complexity also removes the possible object of duty from immediate consideration. While the 14-year-old's choice concerns an immediate descendant who is likely to interact with her at some point, many of those who in the climate case would come to experience a degraded environment are distant descendants whose lives will have no effect on us or our present societies. It could be argued that less or no interaction characterises the relationship between many contemporaries who are distant from one another in space. Yet, with regard to distant future people, our interaction with them is not minimal but non-existent; it is not an open possibility but impossible.

The choice of the 14-year-old is thus a simple "different people choice", while inducing climate change is, in addition, a "different number choice".

With regard to interaction, the climate case can be understood as a more difficult case than that of the 14-year-old. For example, approaches to the non-identity problem that appeal to special duties given parent-child interaction may not apply here (Boonin 2014: 7). With regard to the C-NIP, it is thus particularly important that the account should hold true in a case with no interaction between present and future people.

Numbers

Second, the future people in the climate case are not stable in terms of *numbers*. We know that ordinary choices (without the feature of non-identity) are choices concerning the same people and that, on the contrary, the options of the 14-year-old yield different persons. Yet, it is commonly assumed that the 14-year-old will either conceive one person now or one person later. In the climate case, on the other hand, it is likely that different ways of structuring society will also yield different numbers of people. Given different scenarios, we can often estimate future numbers of people. The choice of the 14-year-old is thus a simple "different people choice", while inducing climate change is, in addition, a "different number choice". The two cases could be depicted so that they do not differ in this way. Yet, a typical climate case will require that an account of intergenerational duties holds true regardless of how many people are estimated to live in future scenarios, while the typical bioethics case does not raise this issue (Parfit 2010).

Agency

Third, the climate case expounded here can be described as one of *collective agency*. We are faced with many individual acts that – taken together – cause detrimental global warming. It has been argued that removing or adding one separate individual act does not make any difference at all to the outcome (Sinnott-Armstrong 2005; Maltais 2013; Kingston/Sinnott-Armstrong 2018). An implication of this would be that these individual acts cannot possibly be described as being morally wrong. In turn, whether and how a collective act in general, or a collective act of emitting greenhouse gases in particular, can or should be described as in itself intentional and thus subject to moral scrutiny is an ongoing discussion in the social sciences (List/Pettit, 2013, 2006; O'Madagain 2012). It might be that there is no act there that can be subject to moral scrutiny, and if there is, it is not clear if and how we should use conventional resources in moral theory to evaluate such an act. The C-NIP may thus require that one addresses questions of collective action (which arose independently in the climate litigation case above).

While the 14-year-old's choice concerns an immediate descendant who is likely to interact with her at some point, those who in the climate case would come to experience a degraded environment are distant descendants whose lives will have no effect on us or our present societies.

Restating the C-NIP

In the *Stanford Encyclopedia of Philosophy,* a practical intuition stated to give rise to the non-identity problem is the intuition that "the existence-inducing acts under scrutiny in the various non-identity cases are in fact *wrong*" (Roberts 2015). In a fairly recent book, which appears to be the most comprehensive overview of the non-identity literature so far, David Boonin (2014: 3-5) similarly describes the efforts to deal with the non-identity problem in terms of accounting for a moral wrong.

It is worth noting that there are other relevant conclusions we may want to draw. More modestly, we could want to account for the intuition that future people's climate matters (at all). A bolder conclusion would be that a nation state (or other political entities) may legitimately act to safeguard future people's climate (Nedevska 2018).

Yet, a moral wrongdoing intuition appears to be the most common one for non-identity scholars to take on. I will here speak of C-NIP in a similar manner. I shall wish to account for the intuition that *leaving future generations with an unsustainable climate is morally wrong*, and describe the difficulties to do so in more detail. A starting point for a detailed formulation of any version of the non-identity problem is Parfit's "time-dependence claim". He states that "[i]f any particular person had not been conceived when he was in fact conceived, it is *in fact* true that he would never have existed" (Parfit 1984: 351, emphasis in original). This,

in turn, has the strange implication that "lowering the quality of life might be worse for no one". Parfit argues:

> *"Suppose that we are choosing between two social or economic policies. And suppose that, on one of the two policies, the standard of living would be slightly higher over the next century. This effect implies another. It is not true that, whichever policy we choose, the same particular people will exist in the further future. Given these effects of two such policies on the details of our lives, it would increasingly over time be true that, on the different policies, people married different people. And, even in the same marriages, the children would increasingly over time be conceived at different times. As I have argued, children conceived [at different times] would in fact be different children. Since the choice between our two policies would affect the timing of later conceptions, some of the people who are later born would owe their existence to our choice of one of the two policies. If we had chosen the other policy, these particular people would never have existed."* (Parfit 1984: 361)

The claim is not very controversial – as Parfit tells us, it is quite "easy to believe" (1984: 361). But believing this claim will have us accept the first in a series of premises that can lead to various counterintuitive conclusions. Boonin (2014) distinguishes five such premises, in a case similar to that of the 14-year-old girl – a woman who chooses under what circumstances to conceive. Here, I expound a partly similar (but in important respects different) non-identity argument in a case regarding the emissions of GHG. The premises are based on common *prima facie* beliefs, and many would on reflection modify at least some of these. The argument is neither provided as perfectly sound, nor as representative of what most people would actually believe. The argument allows us, rather, to categorise and test the assumptions of theories, precisely as responses to the non-identity problem.

[L]eaving future generations with an unsustainable climate is morally wrong.

The first premise

Let us imagine a present generation facing the kind of choice described by Parfit above. Let us assume that the members of this generation must choose whether to keep emitting high levels of GHG or to lower their emissions. If they choose High Emissions, this will destabilise the Earth's ecosystems in a long-term perspective. We may refer to the present population as Generation One (G1). The choice of High Emissions would grant G1 more material benefits, as compared to Low Emissions, which would bring about less material benefits within their lifetimes. If High Emissions is chosen, this will lead to an unsustainable climate. A generation in a later century, Generation Five (G5), will experience a significantly reduced quality of life due to, let us only say, a natural disaster. G5's lives will remain worth living, but just barely. If, on the other hand, G1 chooses Low Emissions, this will (according to the time-dependence claim) yield a different set of people in the future. We may refer to this set as Generation Five* (G5*). These people's environment will be sustainable, and they will not have to endure the disaster that would strike G5.

Assume that – aware of the risks – G1 still chooses High Emissions. As a result of their choice, a natural disaster hits G5 and significantly reduces G5's living standards. Many, if not most of us have the feeling that G1 did something morally wrong. Yet, the people belonging to G5 are not made worse off by G1's choice of High Emissions (Boonin 2014: 3). If G1 had chosen Low Emissions, the people of G5 would not have existed at all. Instead, there would have been G5*, an entirely different set of people.[1] Thus, although G5's living standards have been reduced, they have not been made worse off than they would otherwise have been, had G1 not committed their act. We may then formulate a first premise in a non-identity argument as follows:

P1: Generation One's act of High Emissions rather than Low Emissions does not make the individuals of Generation Five worse off than they would otherwise have been.

The second and third premises

Rendering somebody worse off can be considered a "common sense" definition of harm.[2] For an act to harm someone, many will say, it must make that person worse off than they would have been, had the act not been committed.[3] We may here speak of P2, as follows.[4]

P2: A's act harms B only if A's act makes B worse off than B would otherwise have been.

From these two premises alone, we are able to deduce that Generation One's act of High Emissions rather than Low Emissions does not harm the individuals of Generation Five.

In order to describe the problem correctly, we will need to make a further stipulation at this point: that G1's act does not harm anyone other than G5. In many actual cases of environmental hazards, the consequences are already faced by present generations. It could thus be argued that G1 harms (some of) its own members. Yet, as Boonin argues, it is still reasonable to add this kind of stipulation. When we are faced with the case of the natural disaster hitting G5, and think that G1 did something morally wrong, we do not ask ourselves whether the people of G1 also inflicted some harm on themselves (or require them to have done so in order to say that what they did was morally wrong). What we believe is that G1 did something morally wrong with regard to future people, independently of whether G1 caused any harm to itself (cf. Boonin 2014: 4). That is the kind of intuition we are interested in here. We are interested in whether there are intergenerational climate wrongs; whether there are other kinds of climate wrongs is not our concern. This does not mean that we do not care about present people's situation at all. It only means that, right now, we are theoretically interested in the intergenerational aspect of the climate case. So, we shall formulate, for the sake of enquiry, a third premise, P3.

P3: Generation One's act of High Emissions rather than Low Emissions does not harm anyone other than the individuals of Generation Five.

The fourth and fifth premises

The three premises hitherto accounted for entail that Generation One's act of High Emissions rather than Low Emissions does not harm anyone.

At this point, Boonin would ask us to take into account a principle that many people accept, at least at first glance, namely a moral "harm-principle". His description of this thought is that, if an act harms no one, then the act is not morally wrong. Edward Page, for example, refers to an "intergenerational harms claim" where a High Emissions policy would be "wrong because it harms

future persons" (Page 1999: 112). Roberts writes in the *Stanford Encyclopedia of Philosophy*: "an act can be wrong only if that act makes things *worse for*, or (we can say) *harms*, some existing or future person" (2015). Similarly to Boonin, we may break this principle down into two premises: the claim that, if an act harms no one, then the act does not wrong anyone, and the claim that, if an act does not wrong anyone, then it is not morally wrong (Cf. Boonin 2014: 4). First, that is, we get P4.

P4: If an act does not harm anyone, then the act does not wrong anyone.

Future persons are here unidentifiable not because it is difficult to know or see who they are, but because they still lack identities altogether. Therefore, their identities are also contingent on our actions over time.

This asserts that, if an act does not harm a particular person, then no one has a personal claim of being wronged.

We also get a premise saying that, if no particular person has such a claim, then the act is not morally wrong. We may formulate this as P5.

P5: If an act does not wrong anyone, then the act is not morally wrong.

The counter-intuitive conclusion

The five premises together bring us to our conclusion, C.

C: Generation One's act of High Emissions rather than Low Emissions is not morally wrong.

Some have argued that the non-identity of future people is unnecessarily made out to be troublesome. It has been pointed out, for example, that we need not look to the future to find examples of duties to unidentifiable persons. Joel Feinberg has argued:

> *"We can tell, sometimes, that shadowy forms in the spatial distance belong to human beings, though we know not who or how many they are; and this imposes a duty on us not to throw bombs, for example, in their direction. In like manner, the vagueness of the human future does not weaken its claim on us in light of the nearly certain knowledge that it will, after all, be human."* (1981: 148).

But we have now seen that future people's non-identity can have serious moral implications. This non-identity could be described as ontological, instead of epistemological. Future persons are, in this regard, unidentifiable not because it is difficult to know or see who they are, but because they still lack identities altogether. Therefore their identities are also contingent on our actions over time. In the argument above, we have seen how this time-dependence renders a common conception of harm inapplicable and forces us to draw a counterintuitive conclusion. Given the premises, a generation's act of emitting high levels of GHG, rendering future people's climate unsustainable, is not morally wrong.

Furthermore, the growing phenomenon of climate change litigation shows that the inapplicability of a concept of harm can have practical implications. I initially discussed a case marked by a claim on behalf of present people, where the problem was one of collective action. But in cases involving future people, the inapplicability of a concept of harm could stem from non-identity. In the case discussed, Judge Alsup reasoned that since the defendants' activities in California (and elsewhere in the United States) had not made Californian citizens worse off than they would otherwise have been (a factual observation analogous to P1), there is no causal link between the defendants' actions and the plaintiffs' alleged harm (the judge subscribing, thereby, to P2).

Other premises could deserve our particular attention: P4, which states that harming a particular person is the only way one could wrong him or her; and P5, which states that wronging particular persons is the only way one could commit morally wrongful acts. In order to conclude, coherently, that an intergenerational wrong has been committed, either P1, P2, P4 or P5 needs to be convincingly rejected. If a judge accepts all five premises, it implies that a defendant cannot be said to wrong in relation to distant future generations.

Attention to the non-identity problem is thus warranted, not only for philosophical reasons but because these premises may play a part in important decisions about climate change.

Notes

1 See also Edward Page's "identity dependence claim": "the adoption of the Depletion Policy is a remote, but necessary, condition of the Depletion People coming into existence and leading lives which are worth living" (Page 1999).

2 Lukas Meyer (2003), makes a helpful comparison between the two worse off-notions, *diachronic* and a *subjunctive-historical* harm, showing why P2 (a version of the subjunctive-historical notion) seems preferable with regard to future generations. "A diachronic notion of harm: Having acted in a certain way (or having refrained from acting in that way) at a time t1 we thereby harm someone if and only if we cause this person to be worse off at some later time t2 than the person was before we acted in this way, that is, before t1" (Meyer 2003: 148).

"A subjunctive-historical notion of harm: Having acted in a certain way (or having refrained from acting in that way) at a time t1, we thereby harm someone only if we cause this person to be worse off at some later time t2 than the person would have been at t2 had we not [acted in this way] at all" (Meyer 2003: 148). I have exchanged "interacted with this person" for "acted in this way". It is quite obvious why for our purposes we should avoid a diachronic notion of harm. At the time before our act, which takes place at t1, future generations do not exist at all. We thus lack a point of reference that we may compare to the state of future people at t2, the time at which they experience the consequences of our act. Among these variants, then, a subjunctive-historical understanding of harm will seem more adequate when dealing with future generations. If we accept the time-dependence claim, however, the subjunctive-historical notion of harm (simplified in P2) seems ineffective. G1's act in the case of Depletion gives rise to G5 who would otherwise not exist. G5 will thus not be worse off with a deteriorated environment than they would otherwise have been. We are then unable to appeal to our notion of harm to account for the act as morally wrong.

3 Similarly, Page has referred to a "No Worse Off Claim": "an act harms somebody only if it makes a particular person worse off than they would have been had the act not been performed" (Page 1999: 112).

4 Boonin expresses this differently: "If A's act harms B, then A's act makes B worse off than B would otherwise have been" (Boonin 2014: 3). I find that formulation less pedagogical, as it is not as clear that the concept of harm is the *definiendum* (what is being

defined) while the notion of making somebody "worse off" is the *definiens* (what defines it).

References

Adams, Robert (1979): Existence, Self-interest, and the Problem of Evil. In: Nous, 13 (1), 53-65.

Bell, Derek (2011): Does Anthropogenic Climate Change Violate Human Rights? In: Critical Review of International Social and Political Philosophy, 14 (2), 99-124.

Boonin, David (2014): The Non-Identity Problem and the Ethics of Future People. Oxford: Oxford University Press.

California v. BP (2018): United States District Court for the Northern District of California. No. C 17-06011 WHA; No. C 17-06012 WHA.

Feinberg, Joel (1981): The rights of animals and unborn generations. In: Partridge, Ernest (ed.): Responsibilities to future generations: environmental ethics. London: Prometheus.

Kavka, Gregory (1981): The Paradox of Future Individuals. In: Philosophy & Public Affairs, 11 (2), 93-112.

Kingston, Ewan / Sinnott-Armstrong, Walter (2018): What's Wrong With Joyguzzling. In: Ethical Theory and Moral Practice, 21 (1), 169-186.

IPCC (2014): Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, IPCC, Geneva, Switzerland.

List, Christian / Pettit, Philip (2013): Group Agency: The Possibility, Design, and Status of Corporate Agents. Oxford: Oxford University Press.

List, Christian / Pettit, Philip (2006): Group Agency and Supervenience. In: The Southern Journal of Philosophy, 44 (S1), 85-105.

Maltais, Aaron (2013): Radically Non-Ideal Climate Politics and the Obligation to at Least Vote Green. In: Environmental Values, 22 (5), 589-608.

Meyer, Lukas (2003): Past and Future: The Case for a Threshold Notion of Harm. In: Meyer, Paulson, Pogge (eds.): Rights, Culture and the Law: Themes from the Legal and Political Philosophy of Joseph Raz. Oxford: Oxford University Press.

Nedevska, Jasmina (2018): Why Care About Future People's Environment? Approaches to Non-Identity in Contractualism and Natural Law. Doctoral dissertation, Department of Political Science, Stockholm University

O'Madagain, Cathal (2012): Group Agents: Persons, Mobs, or Zombies? In: International Journal of Philosophical Studies, 20 (2), 271-287.

Page, Edward (1999): Global Warming and the Non-Identity Problem. In: Self and Future Generations – an intercultural conversation. Winwick: The White Horse Press.

Parfit, Derek (2010): Energy Policy and the Further Future. The Identity Problem. In: Gardiner, Stephan M. / Caney, Simon / Jamieson, Dale / Shue, Henry (eds.): Climate Ethics: Essential Readings. Oxford: Oxford University Press, 112-121.

Parfit, Derek (2011): On What Matters, II. Oxford: Oxford University Press.

Parfit, Derek (1984): Reasons and Persons. Oxford: Oxford University Press.

Parfit, Derek (1976): On Doing the Best for our Children. In: Michael Bayles (ed.), Ethics and Population.

Roberts, Melinda (2015): The Nonidentity Problem. In: Zalta, Edward N. (ed.): *The Stanford Encyclopedia of Philosophy*. https://plato.stanford.edu/entries/justice-intergenerational/. First published 3 April 2003; substantive revision 10 August 2015.

Schwartz, Thomas (1978): Obligations to Posterity. In: Sikora, Richard / Barry, Brian (eds.): Obligations to Future Generations. Philadelphia: Temple University Press, 3-13.

Seinfeld, Gil (2018): Climate Change Litigation in the Federal Courts: Jurisdictional Lessons from California v. BP. In: Michigan Law Review, 117 (25), 25-38.

Sinnott-Armstrong, Walter (2005): It's Not My Fault: Global Warming and Individual Moral Obligations. In: Advances in the Economics of Environmental Resources: Perspectives on Climate Change: Science, Economics, Politics, Ethics, 4, 221-253.

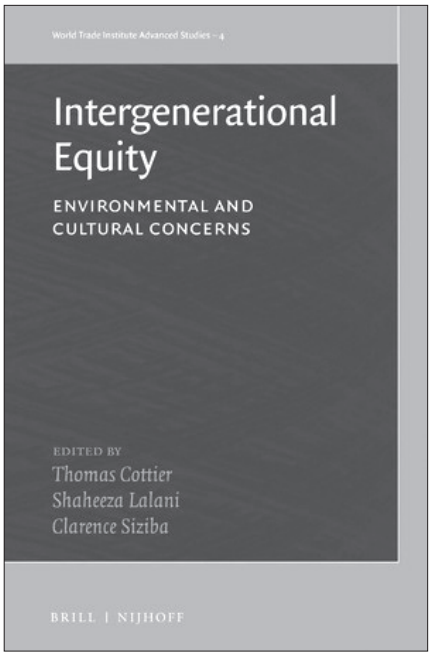
Tremmel, Jörg (2018): Fact-insensitive thought experiments in climate ethics – Exemplified by Parfit's non-identity problem. In: Jafry, Tahseen (ed.): The Routledge Handbook of Climate Justice. London: Routledge, 42-56.

Jasmina Nedevska is a Senior Lecturer in Political Science at the School of Business, Society, and Engineering at Mälardalen University, Sweden, and a 2019-2020 James Madison Program Postdoctoral Research Associate at Princeton University, USA. She holds a PhD in Political Science from Stockholm University and a BA and MA in Political Science from Uppsala University, Sweden.

Contact details:
Jasmina Nedevska
School of Business, Society, and Engineering
Mälardalen University
721 23 Västerås
Sweden
E-Mail: jasmina.nedevska@mdh.se

Thomas Cottier / Shaheeza Lalani / Clarence Siziba (eds.): Intergenerational Equity: Environmental and Cultural Concerns

Reviewed by Nicky van Dijk



This monograph asks the timely question of intergenerational equity – how to best balance the interests of today with those of the future – and does so from a multidisciplinary perspective. Already complex areas such as ocean governance, migration and genocide get an even more complex additional dimension when including their possible influences on the long-term future. While most of the chapters focus on the preservation of natural resources and cultural heritage across generations, some chapters analyse the general theoretical background of intergenerational equity, and propose solutions to formally protect the interests of the future. Hence, *Intergenerational Equity* may be of interest to lawyers, philosophers, historians, political theorists, economists and others interested in intergenerational equity concerns.

The volume is a collection of legal, philosophical and historical papers about intergenerational equity, selected for presentations at the Doctoral Conference "Law, Ideas and Politics of Europe" on 9 October 2015. This conference was hosted by the Rectors' Conference of the Swiss Universities (CRUS) joint doctoral programme of the Universities of Fribourg and Bern. This volume is the fourth in the World Trade Institute Advance Studies series, with three earlier volumes focusing on other topics in the area of international economic law and trade regulations.

Before more generally addressing the appeal of this book and raising a few concerns that remain, I will first briefly summarise the content of each chapter.

The book opens with a preface from Professor Edith Brown-Weiss, a leading legal scholar who put the question of intergenerational equity on the map in international law over thirty years ago. This preface is followed by an introduction by Severn Cullis-Suzuki. While now a scholar at the University of British Columbia, in 1992 at the age of 12 Cullis-Suzuki urged global leaders at the UN Conference on Environment and Development in Rio de Janeiro to think and act more towards the long-term future. Both Brown-Weiss and Cullis-Suzuki offer powerful emotional and philosophical reasons for caring for a healthy living environment for people in the future. More importantly, (again, now 30 years later) they state the need to legally and politically protect intergenerational equity.

The following chapters are divided in three parts. Part I introduces the intergenerational equity debate more generally, while the chapters in Part II and Part III respectively discuss environmental and cultural concerns more specifically.

Part I starts off with Thomas Cottier's helpful summary of the history of the use of "equity" in international law – from the classics to law of natural resources, and from Brown-Weiss leading the movement embracing equity in the sustainable development discussion, to our current use of intergenerational equity. Next, Michael Rose offers a valuable philosophical perspective on the relationship between intergenerational justice and democracy. He develops a conceptual foundation of proxy representation of future generations, cleverly drawing on the all-affected principle and Andrew Rehfeld's theory of political representation. Following this conceptual foundation for proxy representation, Catherine Pearce offers a succinct overview of national implementations of guardians, commissioners and committees intended to guard the interests of future generations. While discussing the different roles and functions of these forms of proxy representation on a national level, she argues for the importance of a similar safeguarding mechanism at the international level.

Part II reflects on environmental issues that transcend the current generation into the future. The first three chapters focus on water as a resource, and deliberate on the appropriate allocation of this resource among generations. Judith Schäli argues for the need to revise current ocean governance, as the current territorial mechanism hampers effective protection of water resources into the future. She suggests the development of the concept of common concern for humankind, which could provide a basis for coordinated action and reform. Similarly, Otto Spijkers also asks the question of appropriate resource allocation between generations, but focuses on fresh water. Spijkers elaborately shows the diverging ways in which existing water law mentions intergenerational equity. While some countries aspire to equality of resources between generations, others merely mention keeping the interests of the future in mind without necessary commitment of compliance to acting on this. In the last short chapter focusing on water as a resource, Karolis Gudas and Simona Weber explain the importance of actively preventing water scarcity when promoting renewable energy, possibly though the framework of sustainable development, as energy policies ignoring intensive freshwater use could be problematic.

The next chapter in Part II on environmental concerns looks at current environmental and climate destruction from a much broader perspective. Anna Asseeva correlates the ineffectiveness

of past and present international environmental treaties to them being limited by state sovereignty and market economies. Looking at the history of the international climate regime, she cleverly highlights times that had potential to disrupt the capitalist narrative and promote more effective environmental policies. In the last chapter of Part II, Sonia Gawlick and Jean Brice Audoye conclude Part I and II, and consider the role and responsibility of businesses in society.

Part III focuses on intergenerational justice issues related to human culture. The chapters discuss a past or current wrong in society, and show the need to prevent this wrong from disadvantaging groups into the future. Melanie Altanian opens by vividly demonstrating how genocide is not just a horrid act with immediate victims, but how genocide denial is also a matter of intergenerational justice towards the descendants of the direct victims. Altanian convincingly argues how keeping genocide in the cultural memory of society is valuable, as it disqualifies the perpetrator group's claim to existential superiority, and acknowledges the victim group as credible authorities on the matter. Later in the book Amyn Lalji's chapter builds on this, discussing how cultural genocide – i.e. the practice of purposefully destroying the practices of a group that allow them to continue as a group – is a matter of intergenerational injustice. He uses Canadian residential schools as a case study. Here, Canadian Indigenous children were (involuntarily) separated from their family to attend schools that would prevent them passing on indigenous knowledge to the next generation. Lalji persuasively stresses the importance of providing spaces for Indigenous institutions to thrive again, thus going beyond talking of reconciliation without action or merely replacing stolen indigenous land.

Focusing on a different phenomenon influencing intergenerational equity, Philip C. Hanke looks at migration. As migration redistributes wealth not just among individuals but through this also across generations, both short-term mobility and circular migration will have winners and losers across generations. In the next chapter, Xenia Karametaxas discusses the intergenerational responsibility of Sovereign Wealth Funds, proposing a government vehicle that could contribute to intergenerational justice. These state-owned investment vehicles manage assets on behalf of the state to meet citizens' future economic needs. They are well equipped to contribute to intergenerational justice because of their large size, long-term horizon and highly diversified portfolios. Last, Roberto Claros discusses how cultural heritage could be safeguarded in international investment agreements. As protecting cultural heritage may interfere with the international obligation to protect foreign investment, Claros looks for a balance between protecting foreign investments as well as cultural heritage.

The epilogue is written by Jona David, a 10-year-old writer of books for the United Nations and Voices of Future Generations Children's Book Series. Similar to the introductory chapter by Cullis-Suzuki, Jona David makes an emotional appeal for the protection of a healthy living environment for the future, and offers ideas for how we could achieve this.

The editors of this monograph aimed to produce a broad-based volume on intergenerational equity, and they definitely succeeded in this. The topics of the chapters are impressively diverse – from the short-term mobility of people to genocide denial, and from the practicalities of freshwater governance to the influence of a capitalist narrative in climate negotiations. The book will broaden the reader's ideas about which areas of policy-making should include intergenerational justice concerns. The chapters also range from fairly theoretical (e.g. the philosophical non-identity problem or analysing epistemic injustice) to fairly practical and solution-oriented (e.g. the potential of Sovereign Wealth Funds or guardians of the future to protect future generations' interests). On top of this, one can appreciate the inclusion of views on intergenerational justice from a wide range of people – from well-respected scholars known in the field, to children.

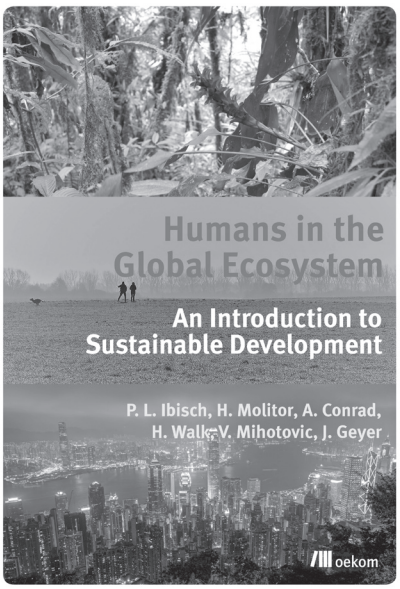
While the broad scope of this book may be a virtue, I also identified some minor shortcomings linked to this. First, though the volume focuses both on environmental and cultural concerns of intergenerational justice issues, very little time is spent on linking these two. This is surprising, as environmental and cultural concerns are often intertwined (both in cause and in solution). For example, the views of vulnerable groups in society, such as indigenous people and women, are often underrepresented in political debates, which is worrisome as it is often said that they are the primary victims of environmental degradation, as well as hold alternative solutions to prevent environmental degradation.

Second, while the preceding conference aimed to reflect on the philosophical notions guiding intergenerational equity debates, little normative philosophical reflection is included about the basic ethical concepts used. Last, very few chapters reflect on the practical implementation on their proposals, e.g. the feasibility concerns. However, maybe this thoroughness on both the theoretical background and implementation side of intergenerational justice cannot be expected from one volume. The editors have done an excellent job at collecting a wide variety of papers that offer food for thought for scholars interested in intergenerational justice concerns.

Cottier, Thomas / Lalani, Saheeza / Siziba, Clarence (eds.) (2019): Intergenerational Equity: Environmental and Cultural Concerns. Leiden, Boston: Brill Nijhoff. 220 pages. ISBN 978-90-04-38799-7 (hardback), ISBN 978-90-04-38800-0 (e-book). Price: €132.00.

Pierre L. Ibisch / Heike Molitor / Alexander Conrad / Heike Walk / Vanja Mihotovic / Juliane Geyer (eds.): Humans in the Global Ecosystem: An Introduction to Sustainable Development

Reviewed by Melissa Ihlow and Maria Lenk



The term "sustainability" is on everyone's lips these days, as hundreds of thousands of young people and climate activists worldwide rally for more climate action and sustainability every Friday. And though there appears to be a general consensus about the necessity for sustainable development to ensure our and future generations' well-being, the public discourse often lacks a deeper understanding of the interdisciplinary intertwining and the necessary holistic approach to the topic – not to mention the lack of drive to actually act more sustainably.

The anthology *Humans in the Global Ecosystem: An Introduction to Sustainable Development*, edited by Pierre L. Ibisch et al., aims to make clear that everybody is responsible for a more sustainable world by giving a systematic overview of the topic. It aims to give an overview of relevant discourses, give thought-provoking impulses and establish clarity about the term "sustainable development". It undoubtedly meets the current *zeitgeist*, having been published at a time when climate action and sustainability is taking an increasingly important position in the mainstream of society.

The book is the brainchild of professors and scholars (and students) at the Eberswalde University for Sustainable Development, Germany, and the result of an inter-departmental foundation course on sustainable development. In four overarching topical chapters, the authors (not individually named in this review for reasons of space) provide background knowledge on the concept of sustainable development from different research disciplines and analyse humans as agents of sustainable development. They present what sustainability means for the economic and political system as well as for civil society before sketching a roadmap for a successful transformation towards sustainability in these systems. The chapters consist of subchapters written by different authors from a range of academic backgrounds ranging from ecology and economics to political science, cultural studies and physics. Each of the individual subchapters can be seen as self-contained units, equipped with marginal notes, in-depth explanations, highlighted important sections as well as illustrations, making it easy to follow the logic of the authors and the book.

In contrast to other introductions to sustainable development (e.g. Elliott 2013; Sachs 2015; Ossewaarde 2018), this book's strengths lie in its in-depth analysis on a meta level and its interdisciplinary, system-theoretical approach. Most introductory works on the topic of sustainable development, however, focus on the global challenges (Reid 1995; Sayer/Campbell 2004), sustainable economy and economic growth (Asefa 2005; Soubbotina 2004; Keijzers 2004), development issues (Bass/Dalal-Clayton 2012) and the impact of unsustainable living on the developing world (Neumayer 2011; Carley/Spapens 1998; Pearce et al. 1990).

After a thought-provoking and powerful preface, the first subchapter (1.1) gives a shocking overview how human life has impacted the planet in a mere span of few hundred years. The author argues that after the Anthropocene, humankind has now reached the epoch of the Tachycene – the age of the great acceleration (25), with the internet and digitalisation being a possible catalyst for opportunities as well as for inequality. The hyper-exponential growth of population and economic activity has led (and continues to lead) not only to boosts in innovation e.g. through digitalisation, but also to malnutrition, inequality and the escalation of environmental problems. Using current research, he touches on various environmental problems such as the fresh water crisis, the loss of biodiversity and climate change.

He argues that, ultimately, "it would be difficult not to link the many negative trends in the environment with the spread of humans and their activities across the planet" (33). Considering the overwhelming scientific evidence, he admonishes "humanity has been warned" (33).

Building on this, in the following subchapter (1.2), Heike Molitor and Pierre Ibisch take the reader on a journey through time and space, tracing back the origins and reasons for the emergence of the sustainability idea and norm as a reaction to environmental problems. While the term "sustainability" was coined in the 18th century by Hans Carl von Carlowitz in respect to forestry "as a reaction to scarcity and crisis" (37), environmental consciousness per se only emerged in the 20th century in reaction to resource exploitation and environmental pollution (38 f.). This well-structured and comprehensive chapter provides the necessary historic and philosophical background knowledge about sustainable development. It does so, moving away from a solely western-centric view of sustainability and by recognising that sustainable thinking is also present in other societies and cultures (47). The authors go on to introduce a number of models of sustainability, which show great overlap with models of intergenerational justice – however

without making the connection to, nor distinction from, "intergenerational justice" or "intergenerational equity".

Subchapter 1.3 strives to provide a description of sustainability from a system-theoretic perspective. According to Pierre Ibisch, the current understanding of sustainability, based on the question of intergenerational equity and the anticipation of "what future generations will really want or need" (60), is ideologically charged and lacks conceptual clarity (60). This subchapter and objective description of sustainability that is rooted in a scientific perspective is the author's answer to this dilemma. After an analysis of the importance of systems, a summary of which principles working living systems function on, and a look at the anthroposystem, the author concludes that the global ecosystem is the "most sustainable system we know" (80), having self-sustained itself over 4 billion years through conversion, replacement, growth and shrinkage. Therefore it should serve as a role model for humankind. This approach shows that "highly complex and structured organisms" (81) have proved to be less versatile and more vulnerable to rapid environmental changes – a warning to humankind. But as reader with a background in social sciences, one might even after this explanation ask the "ideologically charged" question which the author wanted to avoid in the first place: Is it not the responsibility of today's generation to prevent the collapse of the human social system?

Chapter 2 of the book focuses on humans as agents of sustainable development. In subchapter 2.1, Pierre Ibisch and Norbert Jung give a condensed overview over humankind's biological, cultural and socio-political evolution to beings capable of fairness, cooperation and morality as well as ignorance and dissocial behaviour. They conclude that humans are, in their nature, ambivalent beings, capable both of peace and moral action and of injustice and war. Humankind, therefore, is neither exclusively destructive, nor constructive (104 f.). With this, the authors employ a conception of the human being beyond a "homo oeconomicus", acting solely in its own self-interest and based on a cost-benefit analysis, but rather one that resembles von Hauff's "homo sustinens", a human being which can be driven both by self-interest as well as by altruism, cooperation and sympathy (Hauff 2014). Hence, humankind is "fundamentally 'capable of sustainability'" (109), when given the knowledge and motivation and "when people are able to live in free, balanced and just systems – in other words, when they are able to be truly human" (109). However, keeping in mind the ecological footprint of Western democracies, it remains unclear what exactly constitutes a free, balanced and just system in the eyes of the authors.

If one of the factors humankind needs to act sustainably is the right motivation, then how exactly can they be motivated to do so? This question is explored in subchapter 2.2 from a perspective of environmental education. Using examples from everyday life, Heike Molitor distinguishes between intervening towards a more sustainable behaviour, given incentives so that sustainable behaviour "pays off" in economic terms, and influencing habits and emotions as well as promoting self-efficacy. While all three models combined offer a good tool box of what *could* motivate people to act sustainably, it does not give a conclusive answer to why most people do not.

The third chapter of the book analyses anthroposystems – different spheres (systems) in which humans act and interact in a more or less sustainable way. It commences with a subchapter on ecosystems and ecosystem management. Ecosystems are complex systems using energy and accomplishing work. They emerge through the interaction of living beings with each other and non-living resources (131). Because the use of resources provided by these systems has been the starting point of all human economic activities, ecosystems have been – and are still being – overused for many centuries leading to the loss of biodiversity, adaptability and reparability of the system itself (145 f.). Pierre Ibisch raises the question of who pays for this overuse of the ecosystem, concluding that putting a number to some values of the ecosystem, such as soil fertility, and the damage done is simply not feasible (153), so the question remains: who will bear the costs caused by human impact: the current generations, nature or future generations? According to Ibisch, an ecosystem-based sustainable development is essential, because the system cannot be balanced from the outside.

In the next subchapter (*3.2 The drivers: economic systems*), Alexander Conrad and Jan König give an introduction to our economic system and economic growth with all its downsides. We live in a system and society that is market-oriented and focuses on a permanent, strong growth, while resources are wasted and nature is depleted (164). Classically, economic activity is related to the maximisation of utility and profit. Steady and adequate growth has been one of the four main objectives of economic policy in Germany since 1967. The focus on growth is being argued for by politicians with a potential better supply of goods, a high level of employment, a better financing of public services etc. (185). Conrad and König criticise this approach of economics.

As a motor for the economy and lifestyles around the globe, the energy supply system plays a significant role for sustainable development. In subchapter 3.3 Vanja Mihotovic outlines the current status of energy supply, presents different energy production technologies with their pros and cons and provides an interesting glimpse into the future: currently, there is only modest success in climate protection in the European Union through turning away from fossil fuels (194). For the year 2050 in Germany, the author's possible scenario (215) foresees a major shift towards renewable suppliers of energy: the strongest one supposedly being wind energy (>36%), followed by photovoltaic (26%) and biomass (22.5%).

The following subchapter (3.4) focuses on the entities that are responsible for implementing and controlling sustainability strategies: political systems. Including a case study on the German *Energiewende*, Benjamin Nölting, Hermann Ott and Heike Walk (the authors of this subchapter) refer to the German political system in particular. Sustainability is a relatively new issue in politics, but became a "regulatory goal in the sense of an ideal or vision to be aspired to – like freedom, democracy or justice" (224). There is a tension between the two principles "market competition" and "sustainability", whose parallel maximisation is mutually exclusive (224). Therefore, political regulation is in demand. The authors show that, so far, sustainable development is not the all-encompassing guiding principle of German politics.

The civil society – the focus of subchapter 3.5 – plays an important role as another sphere of the anthroposystems in different parts of our life: at national and international level. There has been a substantial growth in forms of participation over many years now, which can help to expand democracy and transparency in democratic systems (258). While many people shift away from large organisations and long-term civic engagement, there is a ten-

dency towards short-term, issue-based and project-related forms of engagement and a rise of internet participation (250). As more people are withdrawing from conventional democratic participation, civil society systems become more important in promoting sustainability. The "how", however, only takes up a marginal part of the subchapter and leaves the reader wanting more.

The last chapter of the book shows, how a transformation towards sustainability can succeed in practice. Pierre Ibisch starts with recommendations for the transition towards "Ecosystem-based sustainable development" (4.1). In our modern culture, there is a nature-culture antagonism, meaning that post-industrial societies desire less interaction with nature and think of themselves as superior. Ibisch gives an insightful view as to why this is problematic, stating that "human beings […] depend on [the] proper functioning [of the global ecosystem]" and thus "the protection of nature is also the protection of humanity" (268). He calls for a turn towards ecosystem-ethics and ecosystem-based sustainable development. This mission needs a fast and effective approach as the potential for a change in direction is diminishing as the ecosystem is being increasingly damaged (279). What we need is a "Great Transformation" – the focus of the following subchapter – a transformation to sustainable development which will cause fundamental structural changes to society, affecting almost all areas of our human coexistence, and as a result, provoke resistance and conflict (289 f.). According to Heike Walk and Pierre Ibisch (subchapter 4.2), a sustainable German society needs a new social contract as well as changes in the democratic system, as this "is poorly equipped to incorporate the interests of future generations" (299). In order for the transformation to succeed, several aspects need to be brought together: politics must be open and provide social spaces and a multitude of different actors and change agents have to get involved – civil society, thought leaders and practitioners.

In subchapter 4.3, Alexander Conrad, Jan König and Hans-Peter Benedikt outline what a sustainable economy could look like. Although capitalism has delivered prosperity and innovations for broad sections of the population, it is also responsible for economic crashes and ecological crises (304 f.). Whilst for conventional economists, environmental damage and social problems are externalities, a sustainable economy would still focus on growth and profit maximisation, but also take into consideration certain ecological and social aspects. In the systemic understanding of sustainability, limits to growth are already incorporated (307). Emerging from the contrast of capitalism and the planned economy, this new economic system needs to take the limits of the ecosystem as its starting point and put them in the centre of economic activity. In that way, potential objectives can be the recovery of costs, reasonable profits and high ecological, economic and social standards adapted to the natural resilience of the environment (311).

Education is another significant system, which shapes our society and strengthens certain ways of thinking. In subchapter 4.4, Heike Molitor recommends the move towards a sustainable society through an orientation to Education for Sustainable Development (ESD) that emphasises values and respect (for future generations) (337). Some important features of this form of higher education are designed to address relevant topics or areas within sustainable development regarding the Sustainable Development Goals (SDGs), to implement a competence orientation in teaching and to encourage participation through self-organisation and Co-determination (343). This subchapter is especially interesting in the context of the global movement Fridays for Future, as the approach of ESD finally brings the topic of climate change to the classroom or lecture halls.

The book's last subchapter (4.5) gives an example of the institutional transformation to sustainability by describing the change process of the Eberswalde University for Sustainable Development – one of the pioneers of the transformation referred to in subchapter 4.2. Not only has the university's name changed and the teaching areas have expanded from forest sciences to sustainable development, but also the systematic orientation towards sustainability is remarkable, e.g. the university has been CO_2-neutral and has had its own environmental management system since 2014.

Overall, the anthology gives vast and profound insights into all aspects of sustainable development and contains a wide range of thought-provoking impulses. The comprehensive structure makes it a valuable and highly recommendable introductory read for students and activists alike. It is the ideal starting point for deepening and correcting one's knowledge about sustainable development. The generally well-connected subchapters – though one sometimes has to turn back and reread pages to figure out the bigger picture – offer long-lasting aha-moments and a lot of new insights. The system-theoretical approach of the book makes it possible to mentally step into the different systems of our daily lives, and to recognise not only their impact on the damage to the ecosystem, but also their potential transformation processes from an interdisciplinary perspective. The book doesn't generally paint humanity's future black or make accusations against all of us for damaging our and future generations' basis of life, but rather points out solution proposals to slow down or reverse current alarming global developments in the earth's ecosystem. And last but not least, published by the Oekom Verlag, the book itself sets an example in terms of sustainability as it is printed on certified, recycled paper and the CO_2-emissions caused by this publication are compensated for.

Ibisch, Pierre L. / Molitor, Heike / Conrad, Alexander / Walk, Heike / Mihotovic, Vanja / Geyer, Juliane (eds.) (2019): Humans in the Global Ecosystem. An Introduction to Sustainable Development. München: Oekom Verlag. 414 pages. ISBN: 978-3-962-38578-1. Price: €29.

References

Asefa, Sisay (2005): The Economics of Sustainable Development. Kalamazoo: W.E. Upjohn Institute for Employment Research.

Bass, Stephen / Dalal-Clayton, Barry (2012): Sustainable Development Strategies. A Resource Book. London: Routledge.

Carley, Michael / Spapens, Philippe (1998): Sharing the world: Sustainable living and global equity in the 21st century. New York: Earthscan.

Elliott, Jennifer A. (2013): An Introduction to Sustainable Development. Fourth Edition. New York: Routledge.

Hauff, Michael von (2014): Nachhaltige Entwicklung: Grundlagen und Umsetzung. Second Edition. Oldenburg: De Gruyter.

Keijzers, Gerhard (2004): Business, Government, and Sustainable Development. New York: Routledge. Cambridge: Cambridge University Press.

Neumayer, Eric (2011): Sustainability and Inequality in Human Development. UNDP-HDRO Occasional Papers, 2011/4, http://hdr.undp.org/sites/default/files/hdrp_2011_04.pdf, Viewed 27 September 2019.

Ossewaarde, Martin (2018): Introduction to Sustainable Development. New Delhi: Sage Publications.

Pearce, David / Barbier, Edward / Markandya, Anil (1990): Sustainable Development: Economics and Environment in the Third World. London: Earthscan.

Reid, David (1995): Sustainable Development: An Introductory Guide. New York: Earthscan.

Sachs, Jeffrey D. (2015): The Age of Sustainable Development. New York: Columbia University Press.

Sayer, Jeffrey / Campbell, Bruce (2004): The Science of Sustainable Development: Local Livelihoods and the Global Environment. Cambridge: Cambridge University Press.

Soubbotina, Tatyana P. (2004): Beyond Economic Growth: An Introduction to Sustainable Development. Second edition. Washington, DC: World Bank.

Call for Papers: Intergenerational Justice Prize 2020

The Stuttgart-based Foundation for the Rights of Future Generations (FRFG) and the London-based Intergenerational Foundation (IF) jointly award the biennial Intergenerational Justice Prize, endowed with EUR 10,000 (ten thousand euros) in total prize-money, to essay-writers who address political and demographic issues pertaining to the field of intergenerational justice. The prize was initiated and is funded by the Apfelbaum Foundation. For the 2020 prize, the FRFG and IF call for papers on the following topic:

Intergenerational wealth transfers through inheritance and gifts

Topic abstract

Wealth transfers across generations combine justice between past, present and future generations (intergenerational justice) with justice within the present generation (intragenerational justice) - as a major reason for the increasing inequality in a society is the accumulation of wealth within families over time. Inheritance taxes deprive the testator of the opportunity to pass on their assets to their direct descendants. Instead, the state distributes them to all citizens. On the one hand, there is the view that the acceptance of private property implies that it should also be allowed in family relationships: wealth may accumulate along family lines, instead of being redistributed to society as a whole at every change of generation. Conversely, it is maintained that the birth lottery (the question of being born into a poor or rich family) should not affect the life chances of the youngest generation.

Undoubtedly, intergenerational transfers of wealth by inheritance and gifts (and related issues of inheritance and gift tax) are a complex issue that has been the subject of many political and philosophical discussions. In this Call for Papers we invite contributions that consider and analyse the topic from various perspectives of intergenerational justice. For instance:

- Is it legitimate for wealth to remain within families, generation after generation? Or should the wealth be taxed by the state, for greater redistribution? Which philosophical arguments speak in favour of the dynastic approach, which ones support the societal approach?
- To what extent do inheritance (and gift) tax systems differ in terms of tax rates and allowances according to degree of kinship in OECD countries or beyond? What percentage of the population is liable to these taxes? How are business assets handled?
- How does inheritance tax relate to the welfare state? Does a higher inheritance tax empirically actually lead to less inequality?
- How (un)popular are (high) inheritance and gift taxes among voters? Can this topic be used to win elections? Are there different opinions depending on age/generation?
- Which relevant narratives and argumentation strategies can be identified in politics, business, society and the media, and where do they converge?

Formalities

The Intergenerational Justice Prize is endowed with EUR 10,000. The prize money will be distributed proportionally among the best submissions, which can be more or less than the top three submissions. Winning submissions will be considered for publication by the editorial team of the Intergenerational Justice Review (IGJR; www.igjr.org) for the summer issue 2021.

For full entry requirements (details of required formatting, addresses for submissions etc, and an official entry form) email Maria Lenk (kontakt@srzg.de) or Antony Mason (awards@if.org.uk).

Closing date for prize submissions: 1 July 2020, 23:59 (GMT+1)

Imprint

Publisher: The Foundation for the Rights of Future Generations (Stiftung für die Rechte zukünftiger Generationen) and The Intergenerational Foundation
Permanent Editors: Antony Mason, Maria Lenk, Markus Rutsche, Jörg Tremmel
Cover: Marius Albiez
Layout: Angela Schmidt, Obla Design
Print: Kuhn Copyshop & Mediacenter, Nauklerstraße 37a, 72074 Tübingen
Website: www.igjr.org
Email: editors@igjr.org

Editorial offices:
Foundation for the Rights of Future Generations (Stiftung für die Rechte zukünftiger Generationen)
Mannspergerstraße 29
70619 Stuttgart, Germany
Tel.: +49(0)711 – 28052777
Email: kontakt@srzg.de
Website: www.intergenerationaljustice.org

The Intergenerational Foundation
19 Half Moon Lane
Herne Hill
London SE24 9JU
United Kingdom
Email: info@if.org.uk
Website: www.if.org.uk