CORA Cork Open Research Archive
Cartlann Taighde Oscailte Chorcaí

Title	Changing perspectives on natural resource heritage, human rights and intergenerational justice
Authors	Skillington, Tracey
Publication date	2018-12-11
Original Citation	Skillington, T. (2018) 'Changing perspectives on natural resource heritage, human rights and intergenerational justice', International Journal of Human Rights. doi:10.1080/13642987.2018.1551210
Type of publication	Article (peer-reviewed)
Link to publisher's version	10.1080/13642987.2018.1551210
Rights	© 2018, Informa UK Limited, trading as Taylor & Francis Group. This is an Accepted Manuscript of an article published by Taylor & Francis in International Journal of Human Rights on 11 December 2018, available online: http://www.tandfonline.com/10.1080/13642987.2018.1551210
Download date	2026-10-10 17:09:39
Item downloaded from	https://hdl.handle.net/10468/7433

UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Changing Perspectives on Natural Resource Heritage, Human Rights, and Intergenerational Justice

Tracey Skillington

Published in *The International Journal of Human Rights*, Dec. 2018

Abstract:

This paper observes how the social, political and legal life of rights continues to evolve in response to growing natural resource scarcity and deteriorating climate conditions worldwide. In particular, it assesses the type of interpretive repertoires actors bring to bear on issues of justice between generations and human rights eligibility, documenting arguments put forward in defense, as well as against assigning a rights status to those not yet born. It notes how scientific research documenting the 'forcing effects' of escalating atmospheric pollution on long-term planetary wellbeing triggers a new conversation on the limits of traditional approaches to environmental justice and highlights the need to consider once again how a more long-term perspectivism on duties, rights and responsibilities can be institutionally applied.

Keywords: generations, human rights, natural resource heritage, climate change, legal change, political presentism

Introduction

This paper explores how a discounting of the long-term costs of current rates of natural resource depletion is defended as 'just' by some and condemned as 'irresponsible' by others. For the latter, excessive levels of consumption of fossil fuels, forests, minerals, as well as escalating rates of atmospheric pollution reflect a form of 'privileged irresponsibility'[1] in that such deeds are not performed in ignorance but with significant awareness of their ecological impact. For the former, ongoing resource exploitation remains an inalienable right of all sovereign states communities, one essential to the exercise of rights to self-determination and continuing economic and social development. Whilst divisions between these positions continue to deepen, where there is agreement is on the power wielded by living generations to save or dispose of finite resource reserves in ways that unborn or, even younger generations today do not exercise power. Lacking contemporaneity and physical presence in the case of future generations, or political influence in the case of youth, both are incapable of prohibiting major polluting agents from defaulting on obligations to ensure that essential resources such as a safe atmosphere 'are fully safeguarded'[2] and the 'dignity' all peoples respected.[3] A key question, therefore, is whether this power ought to be subject to more stringent regulatory control in light of the fact that certain natural resources are needed by all generations, not just those exerting power in the present?

Existing legislation encourages natural resource heritage to be transmitted to future generations in a form that is not unreasonably compromised by the products of our living (e.g., excessive carbon pollution or armed conflict, for instance). For some,

however, there are clear limits to these obligations. Setting aside a portion of scarce resources for the benefit of hypothetical peoples of the future, skeptics argue, makes neither practical nor moral sense, especially when the number of chronically undernourished people in the world is rising (one in every nine people today, according to figures produced by the Food and Agriculture Organization[4], and more than 40% of the present global population are negatively affected by water scarcity).[5] If justice requires that we alleviate the suffering of the least advantaged, critics argue, then the claims of the present resource needy would appear to be more compelling. The analysis below lays out the main arguments presented by exponents of each of these positions, starting with those firmly against assigning a rights persona to future generations before considering how deteriorating climate conditions together with growing scientific evidence of the long-term resource deficiencies is strengthening support for a human rights approach to climate change being explored inter-generationally. The paper draws attention to the type of interpretive repertoires[6] competing actors bring to bear on issues of environmental justice and human rights eligibility, as well as the question of where the boundaries of the just society ought to reside.

The case against ascribing present rights to future generations

For opponents, the main objection to granting a present rights status to future peoples is the latter's potential, as opposed to real existence (i.e., not yet born). While we may feel certain obligations towards future humanity, such as taking account of the more long-term effects of current environmental, economic, and social practices, this does not imply that future persons are presently bearers of rights. Amongst those advocating this viewpoint are Beckerman[7] and Steiner[8] both of whom have questioned whether a correspondence can actually be established between legal rights that exist now and persons who may or may not exist in the future (depending on circumstances). For both of these thinkers, 'the non existence challenge' proves too big an obstacle to ever make a rights argument viable.[9] How, Steiner [10] asks, can rights to finite natural resource reserves be enforced if the bearer of these rights is not in a position to exercise them? Having the power to enforce rights to a clean atmosphere, for instance, presupposes that the rights holder and obligation bearer co-exist. A certain minimum degree of correlativity, they argue, must prevail between parties if rights are to be actualized in a manner that is meaningful.[11]

In this instance, the 'likely future existence' of humans is thought not to offer sufficiently solid grounds for granting recognition to unborn generations' rights to a safe and healthy living environment. It is senseless, they claim, to grant rights privileges to persons who do not and may not exist in the future, especially as those conditions necessary to sustain healthy living continue to deteriorate (e.g., increased exposure to infectious disease, extreme weather events, contamination of food and water sources, etc.).[12] Certainly, escalating rates of global warming are expected to reduce prospects for life on this planet in the years ahead, especially if greater

efforts are not made to steer the current energy system onto a safer development path. Present global trends in emissions rates[13], energy policy (increased investment in fossil fuels) and population growth do not suggest for some that commitments to keep average temperatures below the 2oC threshold set out in the Paris Climate Agreement (2015) will hold. If agreed safe limits are surpassed and global temperatures continue to edge closer to 4oC rise, chemical, physical and biological processes that modulate the functioning of the Earth will begin to break down, at which point the capacity of human populations to adapt, in the face of extreme water stress and crop failure, will invariably decline.[14] Do such future dystopias then offer support to Steiner and Beckerman's argument against assigning rights to future generations?

If environmental conditions eventually do not support human flourishing, can we meaningfully claim that *non-existent future peoples* have being harmed by our failure to preserve a planet that has not been 'irreversibly damaged by human activity'?[15] Further, if future peoples, by virtue of their non-existence, cannot be harmed, how can we legitimately claim they have rights? The right and wrong of current resource depleting practices depends almost entirely, according to this perspective, on the consequences of these actions for living generations, not for those not yet born. Once we begin to talk about rights, we must assume a framework of action in which the performance of a specific set of legal obligations can be realized. But how can we fulfill obligations to peoples who may never exist? Whatever rights future generations may have in the future, they do not possess these same rights now.[16] At most, humanity is said to bear a moral responsibility to take into account the interests of future generations when shaping the contours of the just society. Obligations here include the need to bequeath to future peoples basic liberties and ensure a compassionate treatment of nature[17] but in no way are these obligations seen as offering a legitimate basis for asserting a series of non-correlative rights and duties between specified present and unspecified future peoples. Neither should they be considered a constraint on current standards of living or the pursuit of further economic growth (e.g., the expansion of energy sector). Also advocating this position, the World Bank, in a 2011 report entitled 'Human Rights and Climate Change', notes how 'explicit human rights arguments have yet to gain traction to any appreciable extent within climate change negotiations', especially those referencing future generations.[18] This, it believes, is explained by the absence of any direct support in international law for a rights approach to intergenerational justice.

> The international human rights framework, on its face, appears not to accommodate easily the interests of future generations. The human rights legal framework appears somewhat reactive in its design, geared more to redressing past or imminent harms than the speculative business of scientific predictions pertinent to climate change.[19]

Indeed, the sheer 'speculative' nature of scientific assessments of future ecological conditions, it argues, should discourage any attempts to extend a human rights framework outwards to include future peoples. A human rights approach is even said to risk 'overloading an already fragile climate change agenda', chiefly because human rights are a 'source of mistrust' amongst developing states concerned they

will be used 'as a way of either preventing their development' or imposing 'conditionalities' on their eligibility for climate change adaptation funds.[20] Amongst more industrialized states, also, the World Bank detects a fear that a stronger official recognition of linkages between climate change and human rights violations will bolster the case for further unwanted 'extra-territorial' legal regulations. Causing particular concern is the 'collective or self-standing right to a safe and secure environment' and its use as a 'political or legal weapon against them'.[21] Certainly, such concerns were expressed by the US in its submission to the UN Office of the High Commissioner for Human Rights in 2009 on the relationship between climate change and human rights when it denied the existence of a right to 'a safe environment' under international law and, by extension, the legitimacy of any efforts to promote rights arguments on this basis.[22] Climate change, it added, is 'one of many natural and social phenomena that may affect the enjoyment of human rights and, therefore, cannot be singled out as 'the cause' of human rights violations, particularly those arising internationally.[23] Restricting resource rights eligibility to living 'legitimate' claimants, particularly those with a legal contractual right to precious reserves of minerals, oil, gas, seeds, forests, arable lands, etc., and striking 'a balance' between environmental harm and the benefits of the activities causing it are asserted instead as primary concerns, as is the need to protect the energy, water and development needs of the present.[24]

According to this perspective, rights eligibility cannot be extended to future peoples because, amongst other things, they are not yet the bearers of specific properties. In other words, to 'have rights' is to possess properties to which one can claim a legitimate right. [25] What is proposed instead is a weak consideration of the interests of future peoples, but not their rights. In making this argument, the assumption would be that one can prove the absence of any added value in ascribing rights to future peoples at this point in time. The assumption also would be that one can demonstrate how current rates of depletion of fossil fuels, forests, fish stocks, arable lands, in gravely affecting future supplies, affect only the interests of future generations, but not necessarily their rights to health[26], development[27], a safe environment (constitutionally grounded), or freedom from want.[28] As the science of climate change grows evermore precise, so too does our knowledge of its future impact on the ecological circumstances of generations to come. If current resource depletion practices then are not performed in ignorance of their long-term effects, future ecological disaster correlates directly with negligence on our part.[29]

For legal experts and human rights campaign groups, the World Bank's reading of human rights eligibility is objectionable for a number of reasons. First, it signals what they believe to be a deliberate misinterpretation of the essential nature of human rights (not just a matter of entitlement but, also, duties to others). Rights, they argue, cannot be equated with ownership of the world's remaining lands, freshwater reserves, seeds, minerals and other essential resources in the manner implied by its emphasis on the needs of the present. Second, resource needs, including those arising from increasing rates of global poverty, are as much a matter of intergenerational, as intragenerational equity, given the tendency for poverty to be

transmitted from parent-to-child and declining rates of social mobility more generally.[30]

UN Special Rapporteur on Extreme Poverty and Human Rights, Philip Alston [31] even accuses the World Bank of trying to create a 'human rights free zone', portraying the capitalist order it supports as a hazard to the basic needs of all of humanity. Equally critical, Human Rights Watch[32] describes the World Bank's second draft of its safeguard policies for nearly 12,000 high-risk projects in over 170 countries[33], as a 'dangerous rollback in environmental [and] social protections'. Instead of providing 'heightened protection and vigilance' at this crucial point in our ecological history (in terms of long-term sustainability), such a policy is thought to weaken commitments to international human rights standards and increase the 'discretionary nature' of environmental protections. The Centre for International Environmental Law further questions how more voluntary regulatory arrangements could be seen as a preferable means of protecting the welfare of vulnerable communities, present and future.[34]

We may be uncertain at this point as to what the good life will mean for peoples of the future, or how precisely populations will adapt to living under harsh ecological conditions. However, we do know two basic facts. First, what basic resources populations need to survive and, second, given their finite and precious nature, our responsibilities to ensure such resources are protected. Since future generations are helpless to change what is forced upon them (e.g., a compromised eco-system), it is incumbent on living peoples to impose lesser risks than are currently being created through drilling, ocean trawling, fracking, and similarly destructive practices. Since these practices directly impact upon the health of the planet, they inevitably will also impact upon the health of future generations and restrict the range of choices available to them (e.g., choices as to where to live (habitable lands), what crops will grow, the distribution of freshwater supplies, illnesses and diseases caused by cumulative atmospheric pollution, etc.). It is essential we do not act as if the effects of today's extreme levels of resource extraction do not matter.

The fact that future peoples cannot impose constraints on current rates of resource depletion does not take from obligations to respect their rights to resources.[35] Article 4 of the UNESCO Declaration on the Responsibilities of the Present Generations Towards Future Generations refers to obligations 'to bequeath to future generations an Earth which will not one day be irreversibly damaged by human activity'.[36] Article 5 stresses the need to preserve 'for future generations resources necessary for sustaining human life and development'. Because persons belonging to future generations are recognized as having of this moment certain rights by the UNESCO Declaration of the Human Rights of Future Generations and the Rio Declaration (Principle 3)[37], both offer clarification as to why the welfare *and rights* of future peoples must be protected. Article 2 of the Convention on Biological Diversity[38] highlights the importance of exploiting biological diversity in a 'sustainable' manner and at a rate that does not lend itself to long-term decline. The potential of ecosystems, it adds, must be maintained 'to meet the needs and aspirations of present and future generations'.

Of relevance here are both the individual rights of 'identifiable' living peoples to a sustainable future, as well as the collective rights of future generations whose identity may not be clearly determinable at this point in time but whose need for basic, life sustaining resources is. Freeman[39] in his reading of Raz's[40] interest-based concept of rights, suggests that A (e.g., future generations) has a right to x (natural resources as public goods) only if the interest A has in having x is a sufficient reason for imposing a duty on B (e.g., living generations) to protect A's right to x. Given that the resources in question are basic to survival (e.g., clean water, air, and lands), A's interest in x in this instance is incontestable. Because the preservation of safe and healthy living conditions is essential, sufficient reason is present to impose strict duties on living generations to ensure ecological conditions continue to support planetary life into the future. The interests of no single member of future generations to such resources are sufficient to justify holding present resource users accountable for duties of care and legal responsibility (as Beckerman and Steiner propose). However, the fundamental interests of all together are. The essence of this approach is the normative protection of *all generations'* ecological inheritance, basic wellbeing, and ongoing capacity to be self-determining (to enable sufficient economic, social and cultural development).[41]

International legal agencies, together with a growing number of human rights organizations and climate justice campaigners, draw increasingly on the 'evidentiary' knowledge of science[42], as much as legal arguments to support a position of opposition to attempts to restrict justice considerations (including human rights protections) to the needs of the present.

The contribution of science to the debate on intergenerational justice

Of particular value to these actors is emerging scientific research, using climate models of increasing complexity, which documents how and why global temperatures and atmospheric pollution are rising faster than previously assumed.[43] So detailed are these findings that they prompt a fundamental reconsideration of the way human-environmental interactions have traditionally been conceptualized. Industrial-scale energy flows from fossil fuel carbon, in particular, are transforming the Earth's atmosphere, oceans, biosphere and nutrient cycles[44] at such a pace that we no longer operate within the boundaries of what scientists call a 'safe operating space' for humanity.[45] Increasing knowledge of 'the deep time scales' of human interference with the natural cycles of the planetary system[46] now triggers a

fundamental reconsideration of the long-term justice dimensions of such practices. [47] For instance, with greater understanding of how environmental harms unfold across multiple time frames (and implicate many generations of victims), the realization is that those who contribute to escalating rates of GHG pollution and those who endure its worst effects do not necessarily co-exist within the same time period. Carbon dioxide concentrations in the atmosphere, for instance, cause global warming and global mean sea levels (GMSL) to rise for centuries.[48] Every so-called present point in environmentally destructive practices is one with the potential to reach far beyond the here and now. Similarly, scientists are able to show how the pollution practices of previous generations have had a long-lived 'forcing effect' on present climate conditions.[49] Polluters actively shape the ecological circumstances of the future (the effects of atmospheric pollution on ocean acidification, drought conditions, or land fertility, for instance, more often than not, unfold gradually). The realization, therefore, is that presence is not a prerequisite for the imposition of environmental harm since such harm can be shown to unfold across a wider time scale than just the here and now.

The 'deep time' of ongoing eco-destruction thus necessitates a newer understanding of ecological agency, one that critically re-evaluates relevant contexts for the application of principles of justice and understands, on the basis of latest scientific evidence, how our existence is intricately intertwined with multiple others located across space and time. Chakrabarty[50] notes how in the immediate aftermath of the publication of the Fourth Assessment Report of the Inter-Governmental Panel on Climate Change[51], attention began to shift more substantially to the justice implications of human-made planet vulnerabilities and risks. In particular, the ramifications of a growing lack of symmetry between documented sources of climate harm (geographically and temporally dispersed) and their victims (present *and* future planetary life). Newer scientific evidence did not offer unequivocal support for the historical co-existence of climate harm doers and their primary victims. Instead, it provided a graphic illustration of how pollution practices outrun their original point of initiation and counter-act what many regard as their original intention (i.e., to advance human progress). Each act of ecological destruction, in fact, could be shown to be part of a larger material circuitry of agency that completes itself only gradually in terms of its effects on the wider planetary system. How then could we continue to claim that those legitimately entitled to claim rights to limited resource reserves could only be those who exist in the present? The type of arguments put forward by Beckerman and Steiner on the necessary co-presence of obligation bearers and valid rights recipients no longer seemed entirely convincing in light of newly emerging empirical truths. As a matter of necessity, models of justice became the subject of greater societal scrutiny. It was only a matter of time before popular understandings of human rights eligibility would be re-examined[52] and notions of human rights agency redefined.[53]

In the years since, a matter of growing political and legal relevance is where the boundaries of the just society reside and, relatedly, who ought to be considered its most relevant subjects? Tendencies to accord privilege to the resource rights of presently living generations are subject to dispute, as are the underlining premises of a narrowly defined liability approach to environmental justice (where emphasis is

placed on the co-presence of obligation bearers and rights holders). In particular, the non-reflexive assumptions of presentism embedded in both prove increasingly unsatisfactory.[54] Today we find ourselves confronted with a series of problems for which a broader perspective is urgently required. No obvious solution presents itself for the problem of climate-induced migration (e.g., no legal protections for its victims), no formal settlement arrangements have been established for communities threatened by rising sea levels or desertification, no comprehensive legal arrangements have been forged to address likely future conflict linked to water shortages or the sharing of trans-boundary rivers sources, to name but a few, chiefly because the source of 'wrongdoing' in each case is not straightforward.

Dispersed acts of climate harm, in terms of their effects on vulnerable peoples and multi-sourced origins, do not reach an end point that is readily identifiable (an implicit assumption of a narrowly defined liability approach to justice). There is a worrying lack of evidence of efforts to grasp these facts or engage in forward planning of a type that targets the deeper, more structurally embedded nature of ecological destruction. Without a more long-range perspectivism on duties, rights and responsibilities, critics argue, climate problems are likely to regress even further.

Grounding the rights of future generations in contemporary legal reasoning

Philosophical objections and political resistance aside, rights obligations to non-identifiable future peoples are being asserted in legal discourse on the ground. Furthermore, the 'evidentiary basis' of such rights claims is supported with scientific evaluations of significant long-term ecological destruction. In the final court judgment of the case of the Urgenda Foundation v. Kingdom of the Netherlands, (2015), for example, the Hague District Court upheld the Dutch environmental group, the Urgenda Foundation's right to defend 'the environment without an identifiable group of persons needing protection' in recognition of the sound legal and scientific knowledge base upon which it made its claims of wrongdoing (point 4.6 of proceedings).[55] Similarly, in the case of *Minors Oposa v. Secretary of the Department of Environment and Natural Resources (DENR*)), the Philippines Supreme Court upheld the plaintiffs' right to defend the rights of present and future generations to a 'balanced and healthy ecology' and acknowledged the relevance of the scientific evidence it provided of long-term damage caused by deforestation.[56]

In the case of Zoe and Stella Foster V. Washington State Department of Ecology[57], a similar approach was taken to support the argument that the fate of contemporary youth overlaps with that of future generations and for such reasons, a consideration of the interests and rights of both to a clean atmosphere and other collective natural resources goods is compatible with current, legally enforceable rules. Youth campaigners drew on state constitutionally grounded principles of liberty and rights to an environment that is conducive to health and longevity[58], as well as internationally grounded rights to development and participation[59], noting how scientific findings provide evidence of their violation. Responsibility for the fulfillment of a minimum resource justice across time was defined in all cases in terms of what is owed to present and future generations whose interests, in

hereditary and ecological terms, are connected. This is an approach to resource justice that neither prioritizes nor sidelines the present for the sake of the future but, rather, attempts to address pluri-centric sources of threat to ecological heritage as a project of justice that must extend firmly beyond the present. From this perspective, intergenerational justice cannot be secured through a philosophy of 'each generation to their own', especially when responsibility for climate harms extends across time and is supported by institutional practices that collectively give rise to long-term environmental problems.

Launched in 2011, the global Atmospheric Trust Litigation campaign seeks to defend all peoples' claims to atmospheric resources as transnational public assets in urgent need of protection. Campaigners draw on current scientific research and the doctrine of public trust to advance what they refer to a peoples-centred approach to atmospheric justice. The aim is to force state agencies, via legal challenges, to respond more appropriately to evidence of rising GHG pollution. States are accused of promoting further fossil fuel development and/or failing to control rates of atmospheric pollution or resource depletions and in that, violating 'the fundamental rights of all citizens to be free from government actions that harm life and liberty'. [60] Campaigners draw on the doctrine of public trust to remind states of their obligations to administer, protect, manage and conserve resources held in common (e.g., wildlife, marine resources, forests, fresh water reserves, and in more recent legal applications, the atmospheric commons) for the benefit of all (i.e., present and future generations). The doctrine of public trust has become an important legal resource for campaigners because it mandates affirmative state action to ensure a protection of precious natural resources and in doing so, empowers citizens to question poor management of those resources of immense value to all peoples. To date, Our Children's Trust has partnered with youth and legal expert teams in the US, the UK, Norway, the Netherlands, Belgium, the Ukraine, Pakistan, Uganda, and India to advance this campaign.

One more recent legal case is that brought before the Superior Tribunal of Bogota in Colombia in January 2018 by twenty-five plaintiffs, aged seven to twenty-six, and human rights group Dejusticia (the first Latin American lawsuit defending the rights of future generations). The main grievance is the ongoing deforestation of the Colombian Amazon (the most bio-diverse region in the world) and the risks this poses to peoples' rights to a safe, healthy and sustainable living environment.[61] The government is accused of failing to uphold these rights commitments and not taking necessary steps to reduce rates of deforestation, as agreed under the Paris Agreement in 2015. Responsibility for the initiation of corrective action is therefore said to rest firmly with the state, constitutionally obliged to protect the interests of all members (present and future) and ensure policy compliance with international agreements. Dejusticia (2018) describes recent successful challenges in the US and the Netherlands as inspiring this newer legal campaign and encouraging a spirit of solidarity amongst youth everywhere in their efforts to protect their 'collective reality' (i.e., an endangered future).

Overall, the type of interpretive work generated through this bridging of political realities, legal norms (the doctrine of public trust, the 'no harm rule' in international law and human rights) and scientific evidence on the state of environmental

conditions ensures that prevailing institutional readings of justice standards never fully exhaust the full range of interpretive possibilities, as a component of these standards always remain open to new movements for change. Law, for instance, is tested against the burden of proof of deepening ecological destruction, the rightness claims of competing actors, the value orientations of contemporary publics, as well as technical-pragmatic claims as to how best to attain common goals (e.g., planetary wellbeing) in ways that compel a revision of the common laws governing rational beings.[62] Human rights to health, freedom, and life are endogenized inside specific regional, local, or national settings and, subsequently, externalized as new perspectives on such rights are dialogically produced and spread across other contexts internationally. As this type of communicative work emerges around issues of intergenerational justice, the question that arises more frequently today is whether a rights status should be accorded to future generations? The growing willingness of courts to upgrade the interests of future generations in shared natural resources to the status of a right signals something about changes occurring more generally in societal standards of justice. It also suggests a greater clarity is beginning to emerge on the practical and long-term goal of human rights obligations, that is, to give long-term direction to a legally recognized responsibility to protect and sustain human communities into the future, especially under conditions of growing ecological adversity.

Harmful acts of resource destruction may occur at a distance and during a time period when the primary victim is not yet born, but this does not take from duties to ensure that 'due regard' is shown towards 'the human rights and fundamental freedoms' of such peoples (Article 2 of the UN Declaration on the Responsibilities of Present Generations Towards Future Generations)[63], including a right to legal representation. [64] We may be uncertain at this point as to what the good life will mean for peoples of the future, or how precisely populations will adapt to living under harsh ecological conditions. However, we do know two basic facts. First, what basic resources populations need to survive and, second, given their finite and precious nature, our responsibilities to ensure such resources are protected. Since future generations are helpless to change what is forced upon them (e.g., a compromised eco-system), it is incumbent on living peoples to impose lesser risks than are currently being created through drilling, ocean trawling, fracking, and similarly destructive practices. Since these practices directly impact upon the health of the planet, they inevitably will also impact upon the health of future generations and restrict the range of choices available to them (e.g., choices as to where to live (habitable lands), what crops will grow, the distribution of freshwater supplies, illnesses and diseases caused by cumulative atmospheric pollution, etc.). It is essential we do not act as if the effects of today's extreme levels of resource extraction do not matter.

The fact that future peoples cannot impose constraints on current rates of resource depletion does not take from obligations to respect their rights to resources.[65] Article 4 of the UNESCO Declaration on the Responsibilities of the Present Generations Towards Future Generations refers to obligations 'to bequeath to future generations an Earth which will not one day be irreversibly damaged by human activity'.[66] Article 5 stresses the need to preserve 'for future generations resources

necessary for sustaining human life and development'. Because persons belonging to future generations are recognized as having of this moment certain rights by the UNESCO Declaration of the Human Rights of Future Generations and the Rio Declaration (Principle 3)[67], both offer clarification as to why the welfare *and rights* of future peoples must be protected. Article 2 of the Convention on Biological Diversity[68] highlights the importance of exploiting biological diversity in a 'sustainable' manner and at a rate that does not lend itself to long-term decline. The potential of ecosystems, it adds, must be maintained 'to meet the needs and aspirations of present and future generations'.

Of relevance here are both the individual rights of 'identifiable' living peoples to a sustainable future, as well as the collective rights of future generations whose identity may not be clearly determinable at this point in time but whose need for basic, life sustaining resources is. Freeman[69] in his reading of Raz's[70] interest-based concept of rights, suggests that A (e.g., future generations) has a right to x (natural resources as public goods) only if the interest A has in having x is a sufficient reason for imposing a duty on B (e.g., living generations) to protect A's right to x. Given that the resources in question are basic to survival (e.g., clean water, air, and lands), A's interest in x in this instance is incontestable. Because the preservation of safe and healthy living conditions is essential, sufficient reason is present to impose strict duties on living generations to ensure ecological conditions continue to support planetary life into the future. The interests of no single member of future generations to such resources are sufficient to justify holding present resource users accountable for duties of care and legal responsibility (as Beckerman and Steiner propose). However, the fundamental interests of all together are. The essence of this approach is the normative protection of *all generations'* ecological inheritance, basic wellbeing, and ongoing capacity to be self-determining (to enable sufficient economic, social and cultural development).[71]

What more recent legal discourse on intergenerational justice makes clear is that human rights law cannot be interpreted in a manner that is time specific. The 'equal and inalienable rights of all members of the human family'[72] transcend the temporal frame of the present and include all generations of humanity. Under such law, we are bound by rights duties even if the corresponding rights holder is absent at this point in history.[73] The understanding, therefore, is that future peoples have present rights and further, that such rights have a foundation in existing law. Just as geographical location is thought to have no moral relevance (in principle) to the application of universal human rights, equally, location in time is said not to provide sufficiently rational grounds for dismissing claims that future peoples possess rights (particularly relevant in light of the discovery of the 'deep time' of anthropogenic ecological destruction and the 'deep justice' implications of the same). Without temporal or geographical specification, universal rights to liberty, health or development are defended behind a 'veil of ignorance'[74], that is, without knowledge of the specific circumstances or characteristics of relevant parties to these rights (e.g., race gender, age, nationality or social position). Equally, a lack of knowledge of the specific identity of future peoples no longer provides sufficiently rational grounds for dismissing efforts to extend principles of democratic justice to

unspecified future others.[75] The fact that future victims of cumulative anthropogenic climate destruction and present-day wrongdoers do not always overlap in time is of limited relevance in this instance. Of greater importance is the fact that 'we can affect for better or worse, right now'[76] the ecological circumstances and wellbeing of future generations. The fact that this power is not being used constructively to lessen the imposition of ecological burdens on future peoples is deeply problematic, chiefly because it violates duties to transfer to new generations at least as much (and safe) resource wealth as inherited from previous ones[77], as well as legal obligations to do the same. The type of common property reasoning that guides such a definition of duties, rights and interests, of course, runs contrary to the acquisitional logic of a capitalism 'without limits'[78], with its emphasis on private ownership rights (contractually grounded) and market imperatives. This is perhaps the main reason why the corporate world so vehemently opposes the institutional relevance of a public trust doctrine, with its emphasis on forests, rivers, minerals and other resources as a common heritage and, more generally, intergenerational interpretations of rights.

In spite of opposition, the possibility of grounding human rights inter-generationally and formulating justice in deeper temporal terms is something that could be said to be already articulated in law (albeit largely implicitly at present). References to future generations and a responsible use of natural resources are evident across a range of legal instruments, some of which are mentioned above, but, also, a significant number of state constitutions. In the case of the latter, references tend to be either general provisions for the protection of future peoples, or more specific references to the natural environment, prone as it is to intergenerational misconduct. While some constitutional provisions focus on the rights of each citizen to environmental protection[79], others specify the right of 'every person' to an environment that is conducive to health and emphasize that 'this right will be safeguarded for future generations as well'.[80] Others still focus on the responsibilities of the state to act as a guardian of the resource commons. Article 20a of the German constitution, for example, defines the role of the state as protecting 'the natural living conditions' of all, including 'future generations'.[81] Similarly, the constitutions of the Netherlands and Switzerland include a government mandate to fulfill responsibilities towards future peoples.

Collectively, such legislation is an important acknowledgement of states' commitments to preserving opportunities for peoples to survive an exhaustion of the Earth's finite natural resource reserves.[82] Second, it validates a legal prohibition of practices that knowingly disadvantage or harm the interests of present and future peoples. Third, it acknowledges the 'equal concern and respect we owe to all humans, regardless of where and when they may have been born'.[83] Future justice campaigners[84] point to the necessity of acknowledging the strongly practical relevance of such legislation and the importance of countering moves on the part of the corporate world, especially, to minimize obligations to future generations, as well as efforts to make human rights eligibility dependent on property rights. As a corrective, these actors stress the dual role of all generations as beneficiaries of the conservation efforts of previous ones and as trustees of common ecological heritage

for generations to come.[85] As WildEarth Guardians[86], a US-based eco-justice campaign group, assert: 'We don't inherit the Earth from our parents; we borrow it from our children'. Arguably, the legal grounds on which a deeper, inter-generationally relevant justice framework could be built are already present, if the will to actualize them is present. Certainly, the momentum to do so is growing.

Prospects for a deep justice framework: Substituting 'political presentism' for a 'democratic futurism'

Putting a deep justice framework into practice, however, requires that certain practical issues be addressed first. At present, it is not entirely clear how living generations can ensure that future ones will have sufficient opportunities, resources, and a quality of life at least as good as that enjoyed by their predecessors given that pollution effects unfold gradually. Also, a responsible regulation of intergenerational conduct raises serious questions about what development practices can be defined as 'acceptable' and in line with international human rights regulations? For many, the best way to determine 'acceptable development practices' is to first decipher what is unacceptable. For actors such as Greenpeace[87], World Future Council[88] and Friends of the Earth Europe[89], Arctic drilling, razing the rainforests, or the bottom trawling of oceans, as practices that cause 'serious widespread and long term harm to the health, safety, or survival of future generations' are unacceptable. The World Future Council goes so far as to describe these practices as equivalent to 'crimes against future generations'. The definitional boundaries of legal interpretations of 'crimes against humanity' are deliberately extended here to include future peoples, as is the traditional, narrow interpretation of liability (i.e., that we are liable only for harms imposed on peoples in the legal present). Significant damage to the world's ecosystems, leading to interference with the peaceful enjoyment of its resources, is said to be a concern of all of humanity and the gravity of this destruction is such that when it occurs, all generations are injured, both present and future. Particular emphasis is placed on the protection of the atmosphere, the oceans, seas beyond territorial waters, and the Arctic, all of which are recognized as *Res nullius* in law, that is, as resources that belong to no one and, therefore, should not be sites for commercial exploitation and state rivalry, yet are threatened by both. From this ecological perspective, 'crimes against humanity' arise when there is a connection between repeated acts of destruction and a significant deterioration in the quality of common resources over time (i.e., present and future).

If future generations were to be officially recognized as a relevant legal subject in legislation governing crimes against humanity, in what configuration would intergenerational rights be evoked to advance a deeper framework of ecological justice? Second, how would a judgment be made regarding 'unacceptable' levels of ecological harm (i.e., constituting specifically 'crimes' against present and future humanity) when sources of harm are often dispersed across multiple action sequences and generations? Third, how would excessive violations of the rights of future generations be addressed? In raising these issues, I wish to highlight the importance of addressing the procedural, as much as the interpretive dimensions of intergenerational justice. The fact that future generations are referenced across a range of existing legal instruments (including state constitutions, international declarations and conventions) is not, arguably, in itself sufficient to ensure necessary

changes will occur in procedures of justice, or result in better decision-making outcomes (e.g., the implementation of a series corrective measures, the banning of certain pollutants, or the immediate revision of non renewable energy targets downwards in recognition of the detrimental effects of burning further fossil fuels on global warming). An underlining bias towards the present as the most relevant context of justice remains in tact. For a deeper justice framework to become more institutionally viable, 'political presentism'[90] must be challenged and a type of 'democratic futurism' explored instead. The latter would embrace a more anticipatory approach to climate justice where manageable thresholds of CO2 emissions are planned for and enforced with the future firmly in mind, and a critical loss of specific possibilities for justice, freedom, human flourishing, and self-determination consciously avoided.[91]

The realization is that intergenerational justice must be a matter of assignable, claimable, institutionalisable and enforceable rights that hold ground across time. It is the responsibility of all states to ensure 'the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage' of this world[92]. Furthermore, the expectation is that states will protect the resource interests of present and future generations in a manner that facilitates the capacities of both to be self-determining, and will do so in a way that respects the rights of all state communities to do the same. The Responsibility to Protect (A/RES/63/308), endorsed by the UN General Assembly in July 2009, clarifies, amongst other things, each sovereign state's responsibility to protect the peoples within its borders from gross violations of human rights. The question being explored at present is whether state endorsed pollution practices represent violations of the responsibility to protect and uphold human rights law?

In principle, when states fail to fulfill such obligations, legal action can be taken against them. While there are no historical precedents to date of cases where the international community has intervened when a state has allowed the natural resource base of its peoples to deplete to grave levels and in that, has violated their rights, there is, nonetheless, a growing number of cases where concerned citizens have taken it upon themselves to hold states legally accountable for neglecting their natural resource interests and human rights (e.g., their rights to health, liberty and development), and failing to safeguard these rights for future generations as well[93]. In that, law offers publics a mechanism with which to realize constitutional rights to challenge government actions deemed harmful to their welfare and achieve greater testimonial justice on matters of profound importance to their future. Importantly, legal challenges are a reminder to states of constitutional requirements to remain open to newer demands of justice, including those emerging amongst growing numbers of aggrieved youth. More generally, legal challenges give us some sense of how 'the social' and 'legal life of rights'[94] continues to evolve, as publics (especially legally engaged ones) try to make sense of the justice dimensions of deteriorating climate conditions worldwide. In the process, new democratic iterations of ideals of freedom, democracy and right are generated and stimulate the justice imperatives of law, especially those requiring states to invest in 'our common future'. [95]

Conclusion

In light of the growing relevance of a strongly practical and scientifically grounded critique of traditional institutional approaches to environmental justice (e.g., prioritizing the needs and rights of the present), notions of rights eligibility and human rights agency are evolving. Those most active in pushing for reform are international human rights agencies, in collaboration with youth and future justice campaigners. Together, these actors have embarked on a series of legal challenges of state inaction on pollution control and human rights protection (e.g., rights to health, development and life as relevant to present and future generations). The type of interpretive work generated through such legal efforts as well as wider justice campaigns reaffirms the relevance of human rights to an expanding range climate change issues. This, combined with the increasing tendency for sympathetic court judges to support the constitutional validity of publics' 'climate rights claims' suggests that the type of evaluative frameworks brought to bear on such issues are changing.[96] Cumulatively, these changes hint at new conditions of possibility for a deeper justice framework to emerge, at least in the legal sphere. The settled convictions of traditional state perspectives on pollution practices become an ever more regular object of criticism (e.g., a narrowly defined liability approach to environmental issues), as do established orders of justification that prioritize the interests and rights of some over those of others. New interpretations of reasonableness are beginning to emerge in contexts where legal disputes on matters of environmental justice are resolved. This, together with more recent moves, including the decision of the International Criminal Court (September 2017) to include for the first time concerns about the environment in its range of criminal investigations, would suggest that a degree of institutional learning is under way.

It is publics, however, who generate such new critical insights, at least initially, and insist that the democratic structures of Anthropocene societies address climate harms in a manner that is fair to all concerned. Growing public awareness of the extended nature of ecological degradation (due to a greater public availability of scientific research on pollution levels) triggers a renewal of demands for greater intergenerational solidarity. The temporal direction of accelerating rates of pollution and their cumulative negative effects on health and living conditions create problems of asymmetry in relations of power between generations. Yet, at present, no one is assigned the task of addressing such inequalities.[97] This brings to the fore fundamental issues regarding status inequalities and unfair exclusions that youth coalitions, in particular, insist must be addressed immediately.[98] In principle, all state democratic institutions are open to the possibility of institutional reform in response to such new justice demands. Indeed, a legal normative principle of openness is embedded in most democratic state constitutions (covering all aspects of decision-making from legislative, administrative, regulatory through to their operational dimensions) and EU Treaties.[99] Both existing political decision-making and legal

frameworks are, therefore, capable of accommodating new justice imperatives. The focus now must be on actualizing these potentials and working towards building more sustainable futures, addressing the uncooperative stance of governments and corporate actors alike, and protecting the rights of present and future generations.

[1] See J. C. Tronto, (1993, *Moral Boundaries: A Political Argument for an Ethic of Care*, New York: Routledge), p. 154-5.

[2] See Article 1, Declaration on the Responsibilities of the Present Generations Towards Future Generations (1997).
[3] Article 3, ibid.
[4] Food and Agriculture Organization, International Fund for Agricultural Development (2016, World Food Program, 'The State of Food Insecurity in the World 2015. Strengthening the Enabling Environment for Food Security and Nutrition', Rome: FAO, available at http://www.fao.org/3/a4ef2d16-70a7-460a-a9ac-2a65a533269a/i4646e.pdf (accessed: 19 September 2016).

[5] See United Nations (2017) Water, available at http://www.un.org/en/sections/issues-depth/water/ (accessed 13 March 2017).

[6] I am using M. Wetherell and J. Potter's ('Discourse analysis and the identification of interpretive repertoires', in C. Antaki (ed.) *Analysing Everyday Explanation*. London: Sage, 1988) understanding of interpretive repertoire as a set of culturally familiar arguments (comprising of recognizable themes and tropes) actors draw upon to develop a credible stance on some issue. Repertoires are understood as a social resource in that they are available to all who share a cultural language.
[7] See W. Beckerman, Wilfred (1999) 'Sustainability and Intergenerational Justice', in Dobson, Andrew (ed.) *Fairness and Futurity*, Oxford: Oxford University Press) p. 71.
[8] See H. Steiner (1983) 'The rights of future generations', in D. MacLean, & P. G Brown (eds.) *Energy and the Future*, New Jersey: Rowman & Allenheld) p. 154, 259.

[9] See also A. Gosseries (2008, 'Future Generations' Future Rights', *The Journal of Political Philosophy*, 16(4): 446-474.

[10] See H. Steiner (1983) 'The rights of future generations', in D. MacLean, Douglas & P. G. Brown (eds.) *Energy and the Future*), p. 154.

[11] See also O. O'Neill (2010) 'A Kantian Approach to Transnational Justice', in Brown, Garrett W. & Held, David (eds.) *The Cosmopolitan Reader*, Cambridge: Polity), 67.

[12] See The Lancet (2017) 'Estimates and 25-year trends of the global burden of disease attributable to ambient air pollution: an analysis of data from the Global Burden of Diseases Study 2015', 389(10082): 1907-1918. (May 2017), http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)30505-6/fulltext (accessed November 20, 2017).

[13] See National Geographic, 'Global Carbon Dioxide Emissions Are Rising Again- Latest Stories', (November 13, 2017), https://news.nationalgeographic.com/2017/11/climate-change-carbon-emissions-rising-environment/ (accessed March 2, 2018).

[14] See, for example, V. R. Barros et al., (2014, Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects, Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge: Cambridge University Press); Also, Cropwatch (2016, 'Impacts of Extreme Heat Stress and Increased Soil Temperature on Plant Growth and Development', online at http://cropwatch.unl.edu/2016/impacts-extreme-heat-stress-and-increased-soil-temperature-plant- (accessed: 8 August 2016).

[15] Declaration on the Responsibilities of Present Generations Towards Future Generations, Article 4, (1997), http://www.ohchr.org/EN/Issues/Education/Training/Compilation/Pages/15.DeclarationontheRespons (accessed March 2, 2018).

[16] See W. Beckerman & J. Pasek, *Justice, Posterity and the Environment* (Oxford: Oxford University Press, 2001), 14.

[17] See W. Beckerman (1999, 'Sustainability and Intergenerational Justice', in Dobson, Andrew (ed.) *Fairness and Futurity*, Oxford: Oxford University Press), 86-87.

[18] Ibid., p. 9.
[19] World Bank (2011) 'Human Rights and Climate Change: A Review of the International Legal Dimensions', available at http://siteresources.worldbank.org/INTLAWJUSTICE/Resources/HumanRightsAndClimateChange.pdf (accessed: 25 July 2016), p. 47.

[20] Ibid, p. 10.
[21] Ibid., p. 10.
[22] United States (2009) 'Observations by the United States of America on the relationship between climate change and human rights', available at www.ohchr.org/Documents/Issues/ClimateChange/Submissions/USA.pdf (accessed March 14, 2017).

[23] Ibid., p. 4.
[24] See, for example, World Bank Group (2017, 'Energy and Environment', http://www.worldbank.org/en/research/dime/brief/energy-environment: p. 1); See also World Bank Group (2013, 'Thirsty Energy', http://www.worldbank.org/en/topic/sustainabledevelopment/brief/water-energy-nexus), 1-2.

[25] See also W. Beckerman (1999), 71.

[26] International Covenant on Economic, Social and Cultural Rights, 1966, Article 12; Convention on the Rights of the Child, 1989 (Article 24), http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx (accessed 2 March 2018).
[27] International Covenant on Economic, Social and Cultural and International Covenant on Civil and Political Rights (1966), Common Article 1, http://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx (accessed March 2 2018).
[28] United Nations Universal Declaration of Human Rights (1948), http://www.un.org/en/universal-declaration-human-rights/ (accessed 2 March 2018).
[29] Especially the failure to curb soaring global rates of GHG emissions. In the years since the Earth Summit in Rio and the signing of the first UN Framework Convention on Climate Change (1992) when parties pledged to stabilize 'greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system' (UNFCCC, Article 2), levels of CO2 emissions have soared (2013 Global Carbon Project Report (September 19, 2014), http://cdiac.ess-dive.lbl.gov/GCP/carbonbudget/2013/ (accessed March 2, 2018) . In March 2015, scientists reported that monthly global average atmospheric concentrations of carbon dioxide exceeded 400 parts per million for the first time in three million years (in the mid-Pliocene era), a figure subsequently surpassed in September 2016 when concentrations increased to 403.3 parts per million, thereby leading the way for further significant increases in global warming and projected sea level rises (UN World Meteorological Organization, 'WMO confirms 2016 as hottest year on record, about 1.1oC above pre-industrial level (January 18, 2017), https://public.wmo.int/en/media/press-release/wmo-confirms-2016-hottest-year-record-about-11%C2% (accessed 2 March, 2018).

[30] See UN Report of the Secretary-General to General Assembly 'Intergenerational solidarity and the needs of future generations' (August 15, 2013), https://sustainabledevelopment.un.org/content/documents/2006future.pdf (accessed March 3, 2018), 5.
[31] P. Alston (2015, 'Extreme Poverty and Human Rights', Report of the Special Rapporteur on Extreme Poverty and Human Rights to the UN General Assembly, (4 August 2015), http://www.un.org/en/ga/search/view_doc.asp?symbol=A/70/274 - See more at:

http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=16517&LangID=E#sthash.tkxTQ8C3.dpuf (accessed March 14, 2017).

[32] Human Rights Watch, 'World Bank: Dangerous Rollback in Environmental and Social Protections', 4 August 2015, https://www.hrw.org/news/2015/08/04/world-bank-dangerous-rollback-environmental-social-protections (accessed 1 August 2016).

[33] See World Bank, 'Environmental and Social Framework: Setting Environmental and Social Standards for Investment Project Financing' (July 2015), http://www.worldbank.org/en/programs/environmental-and-social-policies-for-projects/brief/the-environment-and-social-framework-esf (accessed March 2, 2018).
[34] See Centre for International Environmental Law (CIEL) 'NGO Response: Proposed World Bank standards represent dangerous setback to key environmental and social protections' (22 July 2016), http://www.ciel.org/news/safeguard-policy-endangers-rights/ (accessed March 1, 2018).

[35] For example, Constitution of Japan (Article 11, Chapter III) (1946), http://www.solon.org/Constitutions/Japan/English/english-Constitution.html (accessed August 4, 2017).

[36] See UNESCO Declaration on the Responsibilities of the Present Generations Towards Future Generations (1997), Article 4, http://www.ohchr.org/EN/Issues/Education/Training/Compilation/Pages/15.DeclarationontheResponsibilitiesofthePresentGenerationsTowardsFutureGenerations(1997).aspx. (accessed March 2 2018).
[37] Rio Declaration (1997) Principle 3 http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm (accessed March 2, 2018).
[38] Convention on Biological Diversity (1992) Article 2, https://www.cbd.int/doc/legal/cbd-en.pdf (accessed March 2 2018).
[39] M. Freeman, 'Are there collective human rights?', *Political Studies*, XLIII: 25-40 (1995), 30.

[40] J. Raz's, *The Morality of Freedom* (Oxford: Clarendon, 1986), 166.

[41] Self-determination, as a fundamental principle of human rights law, is considered a norm of jus cogens (a primary rule of international law) and in terms of how it has been defended by the International Court of Justice, as having the status of erga omnes, that is, a human right 'flowing to all' (Parker, 2000).
[42] See, for example, Centre for International Environmental Law (2017) 'Smoke and Fumes: The Legal and Evidentiary Basis for Holding Big Oil Accountable for the Climate Crisis' (November 2017), www.ciel.org/wp-content/uploads/2017/11/Smoke-Fumes-Final.pdf (accessed February 28, 2018).
[43] See IPCC Fifth Assessment Report (2013); Taylor, Patrick and Holdren, John P. Clouds and the Earth's Radiant Energy System (CERES) 'What happens in the Arctic doesn't stay on the Arctic' (2015), https://ceres.larc.nasa.gov/ (accessed March 2, 2018).
[44] See M. R. Raupach & J. G. Canadell (2010, 'Carbon and the Anthropocene', *Current Opinion in Environmental Sustainability*, 2), 210-218.

[45] See, for example, P. Goodwin, A. Katavouta, Y. Roussenov, M, Foster, L. Gavin, E. J. Rohling & R. Williams (2018) 'Pathways to 1.5 and 2oC warming based on observational and geological constraints', *Nature Geoscience*, 11), 102-107.

[46] D. Chakrabarty (2017, 'The future of the human sciences in the age of humans: A note', *European Journal of Social Theory*, 20(1)), 42.

[47] The discovery that the planetary system has entered the era of the Anthropocene was first announced in 2000 by P.J. Crutzen and F. Stoermer (2000, The 'Anthropocene', Global Change Newsletter, 41, 17). The Anthropocene defines a previously undetected interval in geological history, one thought by scientists to constitute the third division of the Quaternary period (2.6 million years ago to the present). For the first time in the history of the planet, Homo Sapiens have become the primary agent of geological change, altering the Earth's carbon cycles, climate and energy flows exponentially and increasing exposure to finite-planet vulnerabilities. The origins of the Anthropocene are thought to be located in the eighteenth century when the invention of steam technology allowed for the rapid expansion of agriculture and industrialization. However, it was only when certain human initiated activities became a force of global eco destruction from the mid-twentieth century (including the expansion of nuclear energy, fossil

fuel combustion, nitrogen and phosphorous in agricultural fertilizers, and subsequently, the spread of micro-plastic particles into waterways and food chains) that the Anthropocene begun to gain real momentum.

[48] See IPCC Fifth Assessment Report (2014, Mitigation of Climate Change: Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, http://www.ipcc.ch/report/ar5/wg3/ (accessed July 24, 2017).

[49] NASA (2017) 'Global Climate Change: Vital Signs of the Planet', http://climate.nasa.gov/causes (accessed December 20, 2017).

[50] Chakrabarty (2017, 'The future of the human sciences in the age of humans: A note', *European Journal of Social Theory*, 20(1))

[51] Fourth Assessment Report of the Inter-Governmental Panel on Climate Change (2007), IPCC Fourth Assessment Report, https://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis (accessed August 3, 2017).

[52] Report of the Office of the United Nations High Commissioner for Human Rights on the Relationship between Climate Change and Human Rights (2009); United Nations (2013) Report of the UN Secretary General, 'Intergenerational Solidarity and the Needs of Future Generations', available at http://www.futurejustice.org/bolg/guest-contribution/un-report-on-intergenerational-solidarity-and-the-needs-of-future-generations (accessed December 15, 2017).

[53] See D. Beyleveld, M. Duwell & A. Spahn (2015, **'**Why and How Should We Represent Future Generations in Policymaking?', *Jurisprudence* 6 (3)), 549-566.

[54] See D. F. Thompson (2010, 'Representing future generations: political presentism and democratic trusteeship', *Critical Review of International and Political Philosophy* 13(1): 17-37, 18**),** for example, examines how presentism manifests itself in laws that neglect the long-term environmental implications of current decision-making and disproportionately restricts the question of representation to those present in the here and now. Those most adversely affected by such decision-making are 'not yet citizens' and those who currently lack a political voice. 'Critical resources may have been depleted and environmental treasures spoiled' by the time these actors are in a position to act.

[55] In its final statement on the case of Urgenda V. the Netherlands, the Hague District Court referenced, amongst other legal instruments, Article 3 of the UN Climate Change Convention, noting states obligations to protect the climate system for the benefit of present and future generations and acknowledged: 'In defending the right of not just the current but, also, future generations to availability of natural resources and a safe and healthy living environment', the legal standards invoked by Urgenda are legitimate and its claims 'are allowable to the full extent' (point 4.9). Le Hague District Court Final Decision in the case of the Urgenda Foundation v. Kingdom of the Netherlands, Case Documents (Final Decision, 2015), http://climatecasechart.com/non-us-case/urgenda-foundation-v-kingdom-of-the-netherlands (accessed February 13, 2018).

[56] Republic of the Philippines Supreme Court, Manila, G.R. No. 101083 July 30, 1993, Minors Oposa, supra note 65, 180. Minors Oposa v. Secretary of the Department of Environment and Natural Resources (DENR) http://hrlibrary.umn.edu/research/Philippines/Oposa%20v%20Factoran,%20GR%20No.% (accessed March 20, 2017).

[57] Zoe and Stella Foster et al. v. Washington Department of Ecology (December 16, 2015). https://www.crin.org/en/library/legal-database/zoe-and-stella-foster-et-al-v-washington-department-ecology (accessed March 3, 2018).

[58] See, for example, Constitution of Norway, Article 112; Republic of the Philippines Supreme Court, Manila, G.R. No. 101083 July 30, 1993, Minors Oposa, supra note 65, 180).

[59] See, for instance, the UN Convention on the Rights of the Child (1989), the European Convention on the Exercise of Children's Rights (1996), https://rm.coe.int/168007cdaf (accessed August 3, 2017). European Convention on Human Rights (1950), http://www.echr.coe.int/Documents/Convention_ENG.pdf (accessed March 3, 2018). Also, the United Nations Framework Convention on Climate Change, Article 6(a)) which asserts rights to participation, survival, and development.

[60] See, for example, Complaint for Declaratory and Injunctive Relief at 85, Kelsey Cascadia Rose Juliana, Xiuhtezcatl Tonatiuh M. Et Al. v. United States, Barack Obama et al., No. 6:15-cv-01517-TC, August 12, 2015).

[61] Colombian Constitution, Article 1 & 11, https://www.constituteproject.org/constitution/Colombia_2005.pdf (accessed March 2, 2018).
[62] I. Kant, Groundwork for the Metaphysics of Morals, Edited and Translated by A.W. Wood (New Haven & London: Yale University Press, [1785) 2002),164.
[72] Universal Declaration of Human Rights (1948), http://www.un.org/en/universal-declaration-human-rights/ (accessed March 2, 2018).
[73] UN, Intergenerational Solidarity and the Needs of Future Generations', 2013:6; See, also V. Muniz-Fraticelli, (Book Review: A Gosseries 'Penser la justice entre les generations: De l'affaire Perruche a la reforme de retraites', *Ethics*, 15, No. 2 (2005): 412-415, 413.

[74] See J. Rawls, *A Theory of Justice* (Harvard: Harvard University Press, 1999), 15-19.

[75] See, for example, the closing argument presented in the case of Urgenda v. the Kingdom of the Netherlands (2015). For a theoretical account, see J. Reiman, 'Being Fair to Future People: The Non-Identity Problem in the Original Position', *Philosophy & Public Affairs* 35, no. 1: 69-92 (2007), 79.

[76] J. Feinberg, 'The rights of animals and unborn generations', in W. T. Blackstone (ed.) *Philosophy & Environmental Crisis* (Athens, GA: The University of Georgia Press, 1974), 65.

[77] See J. Rawls, *A Theory of Justice* (Harvard: Harvard University Press, 1999), 252.
[78] A. Heller, 'Marx and Modernity', *Thesis Eleven*, 8, no. 1 (1984), 44-59.

[79] Article 7 of the Constitution of the Pluri-national State of Bolivia (2009), https://www.constituteproject.org/constitution/Bolivia_2009.pdf (August 4, 2017).

[80] See, for example, Constitution of Norway, Article 112, https://www.stortinget.no/en/In-English/About-the-Storting/The-Constitution/ (accessed March 2, 2018).
[81] Deutscher Bundestag, Basic Law for the Federal Republic of Germany (2014), https://www.btg-bestellservice.de/pdf/80201000.pdf (accessed August 4, 2017).

[82] See UN Secretary General, **'**Report of the UN Secretary General, 'Intergenerational Solidarity and the Needs of Future Generations' (2013: 6), http://www.futurejustice.org/bolg/guest-contribution/un-report-on-intergenerational-solidarity-and-the-needs-of-future-generations (accessed December 15, 2017).

[83] Ibid., p. 6.
[87] Greenpeace, 'This Far, No Further: Protecting the Arctic from Destructive Trawling' (March 2016), http://www.greenpeace.org/international/Global/international/publications/climate/2016/This-Far-No-Further.pdf (March12, 2017).

[88] World Future Council, 'Crimes against Future Generations' (2013) https://www.worldfuturecouncil.org/crimes-against-future-generations/ (accessed July 31, 2016).

[89] Friends of the Earth Europe, 'Norway bars arctic oil drilling in pristine Lofoten islands' (January 16, 2018), http://www.foeeurope.org/arctic-oil-drilling-pristine-Lofoten-Islands-barred-Norway-160118 (accessed March 2, 2018).
[90] See D. F. Thompson, ('Representing future generations: political presentism and democratic trusteeship', *Critical Review of International and Political Philosophy* 13, no. 1, 2010), 18.
[91] A number of constructive proposals along these lines have been presented in more recent years, including the introduction of The Well-being of Future Generations (Wales) Act which obliges public bodies to carry out sustainable development and well-being assessments on their operations, the results of which are published in annual future trends reports to the Welsh Assembly. Another proposal is that made by former UN Secretary General, Ban Ki-Moon, in the 2013 report 'Intergenerational solidarity and the needs of future generations' on the possibility of a new High Commissioner Office for Future Generations being established and short-term thinking in all policy sectors re-oriented towards more long-term goals. The explicit aim in this instance is to ensure that the core principles of the UN Charter and those of the UN's sustainable development goals are merged. The legal rationale for the establishment of such an office would stem from existing international legal commitments to the protection of all

generations across time (see, for example, the Preamble of the International Covenant on Economic, Social and Cultural Rights (1966) which refers to 'the equal and inalienable rights of all members of the human family').

[92] Article 4 of the Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972.
[93] For example, Nature and Youth and Greenpeace Vs. the Government of Norway, 2016; *Minors Oposa v. Secretary of the Department of Environment and Natural Resources (DENR)), Philippines Supreme Court, 1993*).
[94] See R. Forst, 'A Critical Theory of Human Rights- Some Groundwork', in P. Deutscher & C. Lafont Eds. *Critical Theory in Critical Times: Transforming the Global Political and Economic Order (*New York: Columbia, 2017), 74.
[95] See UN (2012, Back to Our Common Future,: Sustainable Development in the 21st Century. Available at: https://sustainabledevelopment.un.org/content/documents/UN-DESA_Back_Common_Future_En.pdf (accessed March 2, 2018).
[96] For example, see Superior Court of the State of Washington, Judge Hollis R. Hill, December 19, 2016.
[97] See United Nations (2013) Report of the UN Secretary General, 'Intergenerational Solidarity and the Needs of Future Generations', available at http://www.futurejustice.org/bolg/guest-contribution/un-report-on-intergenerational-solidarity-and-the-needs-of-future-generations (accessed December 15, 2017).

[98] See, for example, Dejusticia (2018, 'Environmental Justice'; available at: https://www.dejusticia.org/en/ (accessed: 2 March 2018); Foundation for the Rights of Future Generations, (2001, Input Paper for the Second Substantive Session of the Preparatory Committee of the General Assembly Special Session on Children (30 January 2001). See: www.intergenerationaljustice.org/images/stories /publications/united_nations_special_on_children.pdf (accessed March 5, 2017).

[99] For instance, Article 1 of the Treaty on European Union provides that the EU will act 'as openly as possible and as closely as possible to the citizen' (2007). Also, see European Union, Consolidated Versions of the Treaty on European Union and the Treaty on the Functioning of the European Union (2012) Official Journal C326, 26/10/2012, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012M%2FTXT (February 19, 2018). See, also, T. Skillington, *Climate Justice & Human Rights* (New York:Palgrave, 2017), 247.