

In Defense of Emissions Egalitarianism?

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1. Introduction

The idea that every person is entitled to the same amount of greenhouse gas (GHG) emissions has gained momentum. It receives broad support from academics, non-governmental organizations, and leading politicians. Given that, according to this view, emissions are to be distributed in an egalitarian fashion, in the following we will refer to Emissions Egalitarianism (EE). In his book ‘One World – The Ethics of Globalization’, Peter Singer (2002) has famously argued for EE and in past writings we endorsed this position as well (Ott et al, 2004; Ott/Baatz, 2012).²

Criticism of EE usually seems to be motivated out of self-interest from high polluters. Recently, however, Derek Bell (2008) and Simon Caney (2009) brought forward an interesting line of philosophical argument. They criticize EE for being “Atomist” and “Isolationist”: EE falsely ignores other climate-induced costs, such as those resulting from adaptation, and EE ignores other considerations regarding global justice, such as poverty.³ In our opinion, Bell and Caney provide forceful arguments against EE. The paper aims at investigating whether and to what extent EE can be defended against this criticism. We start with a brief reconstruction of the global commons argument for EE and discuss whether or not the atmosphere – or rather: the earth’s sink capacity to absorb GHG – can be classified as a global commons (section 2). Section 3 then briefly outlines how we will proceed in the remainder of this article.

2. The Argument for Emissions Egalitarianism

Singer (2002: 28) starts his argument for Emissions Egalitarianism with the claim that the earth’s atmosphere is a global common good, a claim that is endorsed by many (cf. e.g. Vanderheiden, 2004; WBGU, 2009). Christian Seidel (2012, 2013) has reconstructed the global commons argument for EE in the following way:

(P1) The atmosphere is a global commons.

(P2) A global commons is owned by everyone equally.

(P3) If a global commons is owned by everyone equally, the right to use it should (*pro tanto*) be distributed equally amongst all.

(C) The right to use the atmosphere should (*pro tanto*) be distributed equally amongst all.

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² EE have also been adopted, amongst others, by the German Advisory Council on Global Change (WBGU, 2009) and Anil Agarwal and Sunita Narain (1991).

³ Others have argued along similar lines, e.g. Baer et al (2007) as well as Johan Eyckmans and Erik Schokkaert (2004). See also the very recent books by Moellendorf (2014) and Shue (2014).

In our opinion, the reconstruction accurately captures the key steps of the global commons argument for EE.

Before discussing several challenges to this argument, some clarifications regarding (P1) are required. It is neither obvious what exactly the good is that we are concerned with nor how to classify it. Starting with the former, different terminologies are employed throughout the literature: in addition to “the atmosphere” the respective common good is referred to as “climate”, “climate change”, the “absence of climate change”, or “climate stability” (cf. Seidel, 2012: 182).

The good that we care about and want to sustain is a stable climate which provides beneficial boundary conditions for flourishing human (and animal) lives. The term “stability” is a concept that entails a multitude of beneficial climatically induced states of affairs. A stable climate is threatened by overuse of the earth’s sink capacity. On the other hand, it is always possible to add more GHG molecules to the atmosphere. Thus, one must be more precise: what is limited is the earth’s capacity to absorb GHG without climate change or without “dangerous” climate change (given that anthropogenic climate change already takes place). Still, we do not know with certainty how much GHG can be added to the atmosphere before causing “dangerous” climatic changes. We must rely on probabilities instead. Seidel (2013) therefore proposes that the respective good can be defined as follows: “the capacity of the [earth] to absorb GHG emissions such that the risk of morally unacceptable climate change lies below p ”, or alternatively “a level of atmospheric GHG concentrations such that the risk of morally unacceptable climate change lies below p ”.⁴ Note, that the good defined in this way contains a normative element (in contrast to “the atmosphere/climate/sink capacity” etc.): what qualifies as “dangerous” or “morally unacceptable” climate change has to be determined by ethical reasoning, a value-judgment is required (cf. Ott et al, 2004).

Is “the earth’s capacity to absorb GHG emissions such that the risk of morally unacceptable climate change lies below p ” a global commons as claimed by Singer? A global commons is non-excludable but rival in use: when it is provided to some others cannot be prevented from consuming the good as well (non-excludability) and consumption of the good by some constrains the consumption of others (rivalry).⁵ This seems to be correct for only a limited amount of GHG can be absorbed without risking morally unacceptable climate change. That is to say, once a cap on total emission output is introduced, consumption is rival. But what about the non-excludability condition? In the absence of regulatory schemes, anyone can use the earth’s sink capacity (open access). If a scheme is introduced that governs GHG emissions, however, it is possible to limit an agent’s access to the sink. At least on the level of individuals it is not possible to completely exclude agents from emitting GHG (assuming they cannot be prevented from breathing and digesting). This seems to indicate that the respective good is not a *pure* global commons because others can be excluded to use the good to a certain extent under a regulatory scheme.

Moreover, the sink capacity that we focused on so far is only one of two relevant aspects. If unrestrained access to the earth’s sink capacity is successfully limited, a new good is realized: a protected or stable climate, i.e. a climate system without morally unacceptable climatic changes

⁴ p is a probability.

⁵ The classic example of a global commons is a commonly owned sheep run.

(Seidel, 2012: 184). This good will be used as well all around the globe, insofar as people benefit from the absence of certain negative impacts of climate change like e.g. extreme events. Consumption of *this* good is non-rival and non-excludable. Others cannot be prevented from benefitting from a stable climate⁶ and consumption of some does not inhibit the consumption of others. The fact that this good will benefit different people unequally does neither constitute rivalry nor non-excludability. Hence this good is a (pure) public good for both conditions (non-excludability and non-rivalry) are met (Seidel, 2012: 184, 187). In contrast to “classic” public goods like radio programs, the good contains a normative component though (see above).

Apparently, climate change and the prevention of climate change respectively have two relevant aspects with regard to global goods: the earth’s sink capacity and a stable climate. Although both aspects provide different kinds of benefits, they are interrelated; the more the sink capacity is used, the less stable the climate system will become.⁷ There is a causal driver (human-induced emissions) that impairs this stability over time. Overutilization of a global commons (sink capacity) impairs a global public good (stable climate). Thus, we face a “dialectical good”. Depending on which aspect one focuses, the good has to be classified differently, either as an (impure) global commons or a pure global public good. Note that both aspects occur in both definitions given above: the phrase “such that the risk of morally unacceptable climate change lies below *p*” indicates the stable climate aspect and “the earth’s capacity to absorb GHG emissions” and “a level of atmospheric GHG concentrations” both indicate the sink aspect (for sink capacity in GHG concentrations are interrelated).

In sum, (P1) should be specified in the following way: the atmosphere (as shortcut for one of Seidel’s above definition) is an (impure) global commons *and* a global public good.

3. Procedural and Conceptual Clarifications

Now, what about (P2) saying that “A global commons is owned by everyone equally” given that the atmosphere rather is this dialectical good? Can it still be characterized as a good that belongs to everyone equally? We think that it can. Both, global commons and global public goods are owned by everyone equally. Why, then, should this hybrid or dialectical good that contains elements of both goods not be owned by everyone equally? Even if one concludes that the sink capacity is not adequately classified as a commons, why should the good as defined here not be owned by everyone equally? One may justify unequal ownership by drawing on Locke’s argument for the appropriation of natural resources that are owned by no one (*res nullius* instead of *res communis*). Locke’s overall argument, however, does not support a “res-nullius”-position. Locke argued that, originally, the bountiful earth has been given to humankind in general. Acquisition of natural resources by means of labor and ownership can be justified if a *proviso* will be respected. Locke’s (1993) famous *proviso* requires that “enough” both in terms of quantity and quality should be left for others. Locke’s

⁶ Sometimes others *can* – in principle – be excluded from benefitting from a stable climate by relocating them to an area without these benefits. Given the very high costs associated with such measures we think that in practice excluding others is hardly possible. Seidel (2012: 183) discussed this issue.

⁷ As Seidel (2012: 184) puts it: “commons and pure public goods are closely linked inasmuch as the prevention of overuse of a commons always creates a pure public good”. Translation: authors.

proviso is clearly violated regarding the appropriation of the earth's sink capacity (cf. Schüssler, 2011, Bovens, 2011).

However, one could further questions (P2) by claiming that instead of the atmosphere the totality of all global commons is owned by everyone equally (cf. Caney, 2012: 268-271). Assuming for the sake of argument that this claim is correct, it would result in a very complex allocation procedure. The reason is that distributing use entitlements of the atmosphere must then take into account how (benefits from) all other global commons and public goods are distributed. We have serious doubts regarding the practicality of such a proposal. Anyway, these concerns are structurally similar to our discussion of (P3), and we will conclude that (P3) is false. That is to say, for the sake of the argument we will assume that (P2) is correct. Still, given that (P3) fails, the global common good argument cannot justify EE. After reaching this conclusion we will, however, argue that something in defense of EE can be said on "practical grounds". For these reasons we will not discuss (P2) in any detail but turn directly to the more controversial (P3).

Critique of (P3) can be mapped onto the distinction between Holism/Atomism on the one hand and Integrationism/Isolationism on the other hand that were recently introduced by Caney. In a nutshell, the holism-atomism-distinction refers to whether the distribution of costs generated by different strategies to respond to climate change should each be dealt with separately (Atomism) or whether overall climate-induced costs should be distributed in a combined fashion (Holism). The integrationism-isolationism-distinction refers to whether the distribution of climate-induced costs should ignore the current distribution of overall burdens and benefits (Isolationism) or whether it should be taken into account (Integrationism).⁸

(P3) is plausible only within an approach that is atomist *and* isolationist. In the following, we will show why this is so. We will first discuss arguments in defense of atomism (section 4) and second in defense of isolationism (section 5). We conclude that both approaches are unconvincing. However, we will then claim that Caney's most recent proposal for a holist-integrationist method of emissions allocations suffers from lack of practicality which EE does not (section 6). Pointing out that, at a closer look, EE is not wholly isolationist either and would make the world much more just, we argue that – under present circumstances – EE is favorable over Caney's five-step emissions allocation procedure.

4. Holism vs. Atomism

It is usually acknowledged that there are different strategies to respond to anthropogenic climate change. The most prominent and widely discussed strategies are mitigation (either defined as reducing GHG emissions or as reducing atmospheric GHG concentrations) and adaptation (adapting to changing climatic conditions). If climatic conditions change and adaptation does not occur or is (partially) unsuccessful, a further possibility is to compensate those harmed by climatic changes

⁸ In section 4 and 5 respectively, each distinction will be introduced in greater detail. Caney's two distinctions are based on the assumption that the debate centers on the distribution of overall climate-induced costs. In contrast, the primary aim of EE is to divide a remaining sink capacity. In this paper, we accept Caney's assumption.

(rectification).⁹ Obviously, each strategy is associated with costs. When thinking about how to distribute the costs in a just way, one can either consider the costs associated with each strategy separately (Atomism) or think about how to distribute overall climate-induced costs (Holism) (cf. Caney, 2012). In the past, we have adopted a (moderately) atomist approach. We proposed adopting 'Contraction and Convergence' (Meyer, 2000) in combination with a scheme of financing adaptation in which wealthy, high-emitting countries ought to provide resources to the global South (Ott/Baatz, 2012). We thus applied a certain normative principle to the realm of mitigation (equality plus a transition period to account for the status quo) and another principle to the realm of adaptation and rectification (a combination of the polluter pays and the beneficiary pays principle, in detail see reference). In contrast, proponents of a holistic position assume that one principle (or a combination of different principles) should apply to all realms of climate change; i.e. that a single (combination of) principle(s) should govern the *sum* of responsibilities for mitigation, adaptation and rectification (cf. Caney, 2005, 2009, 2012 and Bell, 2008). Caney (2005, 2006, 2010a) for instance argues that the overall sum of climate-related costs should be distributed according to a certain combination of the polluter pays and the ability to pay principle.¹⁰ Note that the distinction between Atomism and Holism is not categorical but *gradual* in that an approach can be more or less atomist (holist), depending on how many realms of climate change are treated separately from each other (as a package).

4.1 A first challenge – EE ignores important aspects of mitigation

EE and policy proposals based on the notion of EE (most notably 'Contraction and Convergence') have been criticized for ignoring important aspects of mitigation. Emissions matter only insofar as they increase the atmospheric concentration of GHG which ultimately leads to climate change. But another factor substantially influences atmospheric GHG concentrations: GHG sinks. EE, the charge is, ignores sinks and perhaps even all emissions generated by land use and land use changes. "Isolating GHG emissions when our focus should be on anthropogenic forcing as a whole is a mistake" (Caney, 2009: 131). EE is thus criticized for being 'super-atomistic' in that it does not even consider all relevant aspects of – and costs associated with – mitigation.

Ignoring sinks is indeed problematic and *all* factors that have an effect on the atmospheric GHG concentrations must be taken into account. But we claim that EE can do so.

For a start, Caney's claim is somewhat misleading. Instead of emissions, anthropogenic forcing should matter, he claims. However, the things Caney mentions in this respect are natural and artificial GHG sinks. Sinks sequester GHG. This is the reverse process of emitting GHG. Hence, the creating of GHG sinks can be conceived of as negative emissions. Or to put it in more practical terms, if I heat my house (because it is cold outside), cut down some trees in my garden and plant some new ones afterwards my activities have a net effect in terms of emissions / radiative forcing. While some activities release GHG into the atmosphere, others sequester it from there. My net emissions budget can be negative, although in this fictitious example it is probably positive. The example

⁹ A further possibility might consist in so called climate engineering (cf. Rickels et al, 2011).

¹⁰ Holist approaches are also adopted by Edward Page (2008, 2012) and David Miller (2008).

highlights that it is not problematic to express what Caney calls anthropogenic forcing in the terminology of (net) emissions. While increasing GHG sinks can be indicated in terms of negative emissions, destroying sinks can be indicated in terms of positive emissions.

Thus, EE can and must take all emission generating as well as emission sequestering activities into account. Obviously this makes it more complex to determine equal shares of the overall emission budget. However, all reasonable approaches must deal with these issues. How to determine *net emissions* caused by complex processes like land use changes is a general problem of accounting that is not specific to EE or any concept that treats emissions in isolation from other domains of CC. Therefore, the argument that EE ignores important aspects is wrong – or at least only pertains to specific proposals and thus cannot challenge the notion of EE as such.

4.2 A second challenge – EE ignores other climate-related burdens

As stated above, EE employs the principle of equality within the realm of mitigation without considering how costs for adaptation and rectification are distributed; it thus treats mitigation separately from the other realms of climate change. According to a holist position, this is flawed for the same normative considerations apply to mitigation, adaptation and rectification and, hence, there is no reason to treat them differently.¹¹ If so, (P3) saying that “If a global commons is owned by everyone equally, the right to use it should (*pro tanto*) be distributed equally amongst all” is flawed. Rather, one should endorse a principle like:

(P3') If a global commons is owned by everyone equally, the costs related to its (over-) use and maintenance should be distributed equally amongst all.¹²

If a holist position and (P3') respectively are accepted, it seems difficult (even impossible) to defend EE. It is very unlikely that future emissions entitlements ought to be distributed equally when costs for adaptation and rectification are included. First of all, the costs for adaptation will vary considerably around the world (to put it mildly). Second, while some agents will face compensatory duties to different degrees, other will have no such obligations. It is highly implausible that the entitlements (regarding emissions entitlements) and duties (regarding adaptation and rectification) balance each other in that all agents ought to bear equal burdens in the end (so that emissions entitlements ought to be distributed equally). Rather, ‘wealthy polluters’ ought to bear much greater climate-related burdens than, say, ‘poor non-polluters’. In conclusion, EE can only be defended if mitigation burdens are allocated separately from other climate-related burdens. In order to defend EE an argument is required for why this should be done. In the following, we will therefore discuss three independent arguments that try to establish that different normative considerations apply regarding mitigation on the one hand and other responses to climate change on the other. That is,

¹¹ Holism does not object to the IPCC’s claim that adaptation has specific societal, economic, and moral characteristics which differ from mitigation (2007: chapter 18).

¹² Note that the egalitarian principle “should be distributed equally” could be a reason to reject (P3'). Holist approaches usually draw on different combinations of polluter pays, ability to pay, and beneficiary pays principle (cf. e.g. Caney, 2010 and Page, 2008).

these arguments dispute the holist claim that the same normative considerations apply to all fields of climate justice.

4.3 Vanderheiden's arguments for a separate treatment of mitigation

Vanderheiden (2008: 229–230) argues that mitigation is a matter of distributive justice while funding adaptation is a matter of corrective justice (the same claim is made by Risse, 2008: 38).¹³ Similar to our approach, he argues for a roughly egalitarian principle regarding mitigation and employs the polluter pays principle regarding adaptation. That is to say, polluters ought to make up for their excessive past emissions by financing adaptation measure as a way of settling their compensatory duties vis-à-vis potential climate change victims; and this is a matter of corrective justice.

We think that Vanderheiden's argument is unconvincing though. He fails to acknowledge that funding adaptation is *not only* a question of corrective justice. Certainly, corrective justice is of great importance in the realm of adaptation as we have argued ourselves (Baatz, 2013). However, current polluters that are obliged to finance adaptation in order to settle their compensatory duties must not (and cannot) be held accountable for all harm caused by anthropogenic climate change. This would not only overburden them but also be unjust for they would have to pay for harm caused by others. In order for the harm – that polluters are not responsible for in terms of compensatory justice – not to remain unaddressed, many have argued for a hybrid account combining the polluter pays principle and the ability to pay and/or beneficiary pays principle. The ability to pay principle and some versions of the beneficiary pays principle are principles of distributive (rather than corrective) justice (in detail cf. *ibid.*). Thus, funding adaptation is a matter of *both* (re-)distributive and corrective justice.¹⁴ If this is accepted, Vanderheiden's claim that mitigation is a matter of distributive justice while funding adaptation is a matter of corrective justice cannot be sustained and thus cannot justify treating both realms separately.

In a more recent paper, Vanderheiden (2011) also argues that it is wrong to treat mitigation and adaptation as commensurable burdens. If these burdens are commensurable it does not matter to what extent one engages in mitigation or adaptation activities, as long as one takes over the total costs assigned to her. But why is this a problem? Vanderheiden (2011: 68) offers several reasons. First, from the moral point of view it is better to avoid harmful events in the first place rather than trying to avoid the harm by successful adaptation. Second, it is usually taken as valid that mitigation is more cost-effective than adaptation in terms of preventing harm.¹⁵ Third, different people will benefit from mitigation and from adaptation activities (Vanderheiden, 2011: 70). Neglecting mitigation burdens, for instance, means that an agent continues contributing to harmful actions. Vanderheiden therefore argues that “[a]llowing states to treat mitigation and adaptation imperatives as commensurable, and to shift resources between the two at will, imposes externality costs when

¹³ Vanderheiden and Risse do not consider rectification.

¹⁴ Vanderheiden's (2010b: 35) argument has also been criticized by Caney who concludes that corrective and distributive justice do not “neatly [map] on to the difference between adaptation and mitigation”. Note that Caney's argument allowing him to arrive at this conclusion is different from ours.

¹⁵ This holds true at the general/global level. From the perspective of single agents such as states or individuals adaptation will be more cost-effective if it is assumed that others do not mitigate emissions sufficiently.

adaptation efforts displace required mitigation actions. For this reason, such cost-shifting should be prohibited, and mitigation and adaptation burdens separately assigned” (Vanderheiden, 2011: 69).

We think that Vanderheiden is absolutely right. This kind of cost-shifting, however, does not follow from Caney’s argument that the same normative considerations apply to both mitigation and adaptation. Caney simply claims that the costs resulting from the different responses should be distributed according to the same principle(s). This view is silent on the right ‘mix’ of responses. The holist claim is that whatever the costs for mitigation and for adaptation will be, they should all be distributed according to the principle X (or X,Y, and Z). Vanderheiden’s argument rather is that the right ‘mix’ of responses matter, i.e. that it makes a difference whether in a given period 10 units of mitigation and 5 units of adaptation are undertaken or vice versa. But holists can consistently endorse this claim. Vanderheiden’s argument is concerned with what kind of burdens there are (how big mitigation burdens and adaptation burdens are) and this is different from how to distribute these burdens. As long as it is safeguarded that enough mitigation is undertaken, mitigation and adaptation do not have to be allocated separately.¹⁶ In sum, Vanderheiden’s argument regarding the incommensurability of mitigation and adaptation burdens is convincing but it does not show that the holist position is flawed.

In the following, we will consider a rights-based argument that (initially) looks more successful in justifying a separate treatment of mitigation.

4.4 A rights-based reasoning for treating mitigation separately?

Different kinds of individual rights exist that are associated with (different) corresponding duties. The argument we will develop in the following starts from the premise that there are two basic duties: the duty to respect the rights of others and the duty to remedy the violation of rights. We conceive of the former as refraining from an action that will violate the right of another person.¹⁷ This also includes refraining from contributing to a harmful action. We conceive of the latter as providing redress to those who suffer from a rights violation.¹⁸ We consider both duties to be widely accepted. What follows from applying these two basic duties to anthropogenic climate change?

Peoples’ rights are and will be violated by climatic changes. These changes result from increased atmospheric GHG concentrations that can be reduced by mitigation activities. Harm can thus be prevented and rights respected by engaging in mitigation. More precisely, an agent does not violate rights or refrains from further contributing to rights violations if she sticks to her fair share of use entitlements of the earth’s sink capacity (however fair shares are defined). Refraining from the violation of rights therefore is about mitigation (cf. also Shue, 2014: 306-310).

¹⁶ On the other hand, this implies that whenever a global institution safeguarding the right ‘mix’ of responses is lacking Vanderheiden’s argument applies. That is, Vanderheiden’s criticism nevertheless applies to all those holist proposals that fail to safeguard the right ‘mix’.

¹⁷ We only refer to violations and abstract away impairing and compromising rights.

¹⁸ The remedial duty is formulated so as to allow it being associated with both positive and negative duties. If the existence of positive duties is denied, a more narrow definition is in order, stating for example: the duty to compensate those harmed by ones action. We consider the denial of positive duties to be untenable though.

The duty to remedy consists of compensating those suffering from rights violations caused by climate change. That is, the question how to deal with the consequences of *past* overuse of the sink capacity of the earth must be answered. This means to determine a just distribution of remedial responsibilities. The duty to remedy the violation of rights is about adaptation and rectification. The reason for this is due to a special feature of climate change. Usually, and as said above, remedial duties regarding rights violations concern measures to make up for, or at least ease, a suffered loss. The reason is that in these ‘usual cases’ the harm occurs immediately or shortly after the harmful action. This is different in the case of climate change. The substantial time-lag between GHG emissions and negative impacts, usually lamented as a factor that makes it harder for humankind to adopt proper responses (e.g. Gardiner, 2011), is an advantage in this case: it allows adopting protective measures before a potentially harmful event occurs.¹⁹ Hence, an ex-ante form of compensation exists as well: to avoid as much harm as possible in the first place by financing adaptation projects and programs in regions vulnerable to climate change. This is the reason why remedial duties include both adaptation and rectification.

The argument made so far can be illustrated in the following way:

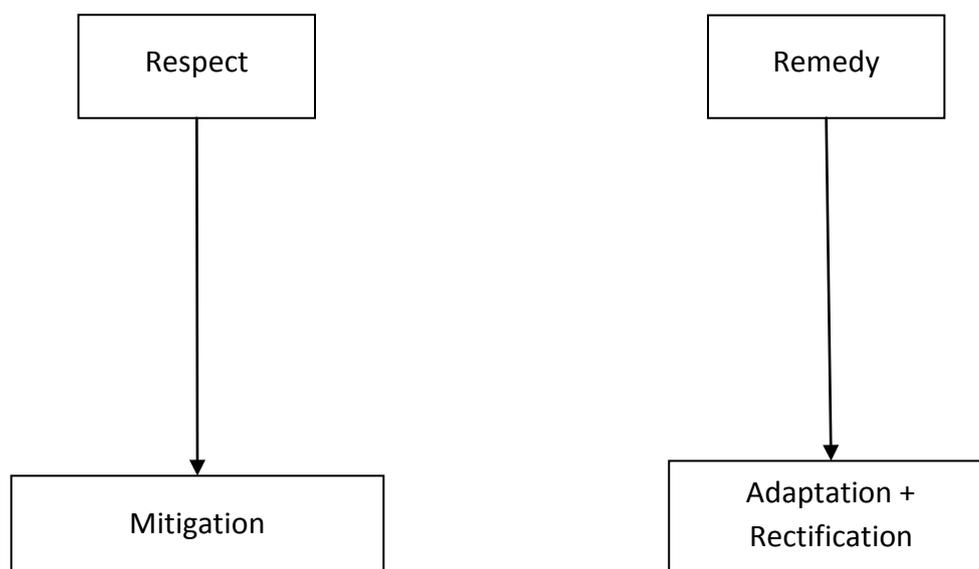


Fig. 1: Rights are respected by mitigation, i.e. an agent does not exceed her fair share of net emissions. The violation of rights is remedied by adaptation and rectification measures.

The proposal is able to distinguish between two general realms of climate justice. One realm is about respecting the rights of others and deals with how to fairly distribute *net* emissions, i.e. with determining each agent’s fair share of the earth’s remaining sink capacity. The other realm is about

¹⁹ This requires several things, though: first, that there is sufficient knowledge about future impacts, second, that measures to counter these impacts exist, and, third, that the resources to implement these measures are available. Our claim is that in some (probably even in many) cases conditions one and two are fulfilled and that it is in ‘our’ responsibility to realize condition three.

how to remedy rights violations due to excessive emissions that did already occur or that will occur if no other preventive action is undertaken. The distinction therefore reasons a (moderate) Atomism.

However, the argument only holds if it is not possible to respect the rights of others by means of adaptation/rectification and, moreover, if it is not possible to remedy rights violations by means of mitigation. That is to say, the argument only holds if it does not make sense to include arrows from “respect” to “adaptation + rectification” and from “remedy” to “mitigation”. Why is that? The argument so far is that respecting rights is *only* about mitigation and that remedying rights violations is *only* about adaptation/rectification. According to this argument, we are dealing with two separate realms in which different normative considerations apply.

Let us deal with a potential arrow from “respect” to “adaptation + rectification” first. The time lag between potentially harmful actions and actually harmful events generates a serious challenge to the proposal. As just explained, in principle it is possible to prevent an event to be harmful by adapting ex-ante measures that reduces one’s vulnerability to such an event. To provide a simplistic example: although climate change will lead to sea level rise and at some point a grave flood will hit coastal town A, citizens of A and their property might not be harmed due to improved sea walls. If agents C, D, and E are responsible for climate change but pay for improving the sea walls they do not, in the end, violate the rights of the A-citizens. That is to say, they respect the rights of members of A. This means that one can respect the rights of others by financing adaptation as well and that, in turn, the distinction between both duties (to respect and to remedy) does *not* map completely onto the distinction between mitigation and adaptation/rectification.

But we claim that this forceful counter-argument moves too quickly and that it is indeed *not* possible to *fully* respect the rights of others by means of adaptation. Once excessive amounts of GHG are emitted, additional actions are required to prevent rights violations. That is, in the moment of excessive emissions rights are in limbo. Others are put at risk. If I deliberately risk violating your right to X, am I fully respecting this right? We do not think so, but arguing for this position would take up too much space and we simply side-step this issue here for it does not change our conclusion below.

Instead, we will turn to a practical argument for why it is not possible to fully respect rights by means of adaptation. The above example of the coastal town is highly stylized – and unrealistic. Most effects of climate change are much more complex than sea level rise and even adapting to sea level rise is often highly complex. As suggested above, substantial knowledge about the likely climatic changes and their effects on socio-economic systems are required to adapt successfully. Also, adaptive strategies must exist and must be affordable. While proper and comprehensive adaptation measures are – in principle – able to prevent many rights violations that would otherwise occur they will not be able to prevent all harms. Some effects will not be anticipated and some losses cannot be prevented. We therefore claim that it is not possible to fully respect rights by means of adaptation because adaptation cannot prevent all rights violations due to barriers in terms of knowledge and resources. But, even if it is not possible to fully respect rights by means of adaptation, this does *not* establish that rights can only be fully respected by mitigation.²⁰ When atmospheric GHG are already elevated (but not so high that dangerous climate changes is inevitable) it will only be possible to avoid rights violation by a mix of comprehensive mitigation and adaptation policies. In such a situation,

²⁰ We are indebted to Pranay Sanklecha for alerting us to this issue.

respecting rights will require some adaptation in addition. This calls into question that respecting rights is only about mitigation all the time.

Let us now deal with a potential arrow from “remedy” to “mitigation”. Is it possible to remedy (possible) rights violations by means of reducing net emissions?

To remedy rights violations via emissions reductions is possible only if an agent reduces emissions beyond what is required in terms respecting the rights of others; that is to say, if she reduces her emissions below her fair share of emissions entitlements. As long as reductions are required to meet the fair share they count as efforts in order to respect rights (cf. above). To make up for past excessive emissions in this way is extremely unlikely at present – irrespective of how fair shares are determined in detail and whether we are dealing with countries or individuals.²¹

Perhaps, a more realistic case is country A reducing its emissions to its fair share and additionally providing clean technologies to country B in order to help B reduce its emissions.²² The lower GHG concentrations that result from this will lead to less climate-induced harm. Remedying rights violations is about reducing the harm dimension – ideally to zero. Thus, (indirectly) reducing net emissions should count as a remedial action. The fact that I can remedy my own or others’ harmful action by stopping to undertake the harmful action in future may come as a surprise: if I slap someone in the face, I can usually not make up for it by simply refraining from future slaps. Climate change, however, is different in that i) emission generating activities only causes harm when undertaken excessively by a sufficiently large number of agents, and ii) a certain level of emissions is required to live decent lives. From these two well-known facts follow the threshold or fair share conception of illegitimate/harmful emissions (in detail see Baatz, 2014).²³ The fair share concept, in turn, allows to directly compensate the excessive emissions of others: If A (directly or indirectly) reduces her emissions by two units below her fair share this makes up for the two units by which B exceeds her fair share. Due to the time-lag between emissions and climate change impacts I can, at least in principle, also compensate my own excessive past emissions. The upshot is that remedying climate change harm (potentially) caused by excessive GHG emissions is *not only* about adaptation and rectification. Fig. 1 can thus be supplemented in the following way:

²¹ On the level of nation states, countries usually believed to bear remedial duties are high emitting and/or wealthy. All these countries exceed their fair share by far, however the remaining small global emissions budget is split exactly. Roughly the same holds true for individuals (cf. Baatz, 2014) although there might be some exceptions. Poor people that emit less than they are entitled to do not have remedial duties (cf. Duus-Otterström/Jagers, 2012).

²² Duus-Otterström and Jagers call this “indirect mitigation” (2012).

²³ The basic thought behind this is that once a total emissions budget is determined that (probably) allows avoiding morally repugnant outcome X this budget must be somehow allocated between current (and future) human beings. If this allocation is just, everyone receives her fair share of emissions entitlements of the overall budget.

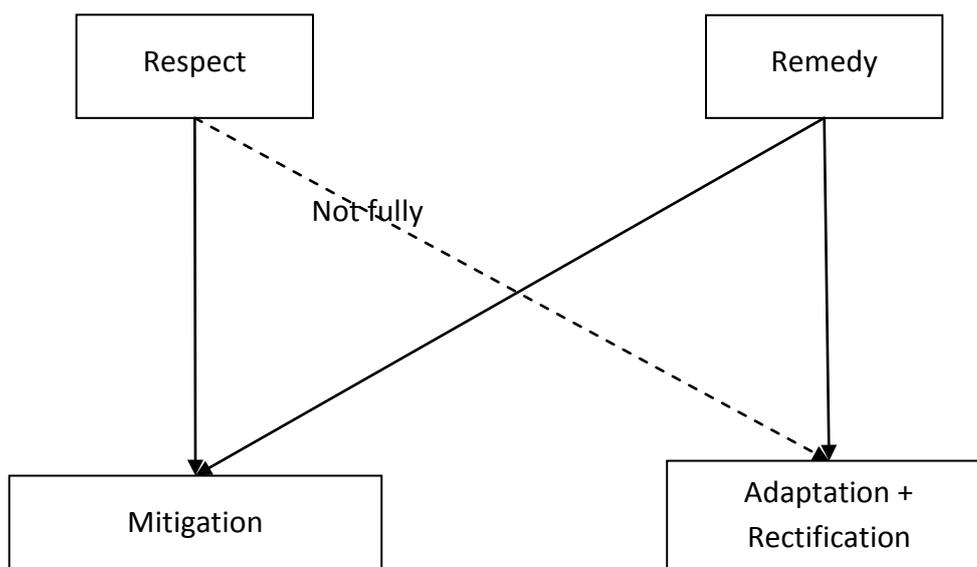


Fig. 2: Respecting rights and remedying rights violations by means of mitigation and adaptation/rectification.

Before moving on, let us pause and summarize the argument set forth in section 4. At the outset we argued that EE can only be defended if mitigation costs are to be distributed independently from costs concerning adaptation and rectification. We then discussed two arguments from Vanderheiden for why mitigation and adaptation costs should be allocated according to different principles. We concluded that both arguments fail. Subsequently, we presented an argument that aims at justifying the separate treatment of mitigation by drawing on the distinction between respecting rights and remedying rights violation. According to this argument, mitigation is only about respecting rights and adaptation/rectification only about remedying rights violations. If so, one can justify that different normative principles apply regarding mitigation (e.g. the principle of equality) and adaptation/rectification (e.g. the Polluter Pays Principle) respectively; that is, how costs for adaptation and rectification are distributed is not relevant for distributing mitigation costs. However, this argument, too, fails because i) respecting rights will require some adaptation in addition to mitigation in certain situations and ii) it is in principle possible to make up for past excessive emissions by reducing current emissions even further. Therefore, normative considerations based on remedial duties can also be relevant in the realm of mitigation and those based on duties to respect in the realm of adaptation. In sum, the argument as well fails to establish a principled distinction between mitigation on the one hand and adaptation/rectification on the other.

5. Integration vs. Isolation

So far, we took for granted that equality is the right pattern of climate justice, i.e. that climate-related burdens, or burdens associated with one of the realms of climate change, ought to be distributed in an egalitarian manner. Of course, EE can be criticized for employing the wrong pattern

of justice and that, say, emissions entitlements should be distributed according to the maximin rule (prioritarianism rather than egalitarianism). Moreover, EE can be criticized for employing the wrong currency of justice because it is concerned with how resources are distributed rather than, say, capabilities. However, there is no need to discuss these claims in greater detail for it points to a general criticism. The charge is that it is wrong to deal with emissions entitlements in isolation from other considerations of justice.

In this respect, Simon Caney and Derek Bell have argued for an integrationist approach. They argue that it is a mistake to treat climate responsibilities in isolation from other considerations of global justice such as trade, development, poverty and health (Bell, 2008 and Caney, 2009). One could add migration, education, nature conservation, and the like. Rather, when reflecting on what to do about climate change we should do so in an integrationist fashion: we should treat the ascription of climate responsibilities in *conjunction* with considerations about global justice in general (Caney, 2012: 271 and Bell, 2008: 254).²⁴ The reason is that theories of distributive justice are usually concerned with fair shares of packages of goods and do not deal with single goods in isolation.²⁵

EE does exactly this: it distributes one good – emissions entitlements – in isolation from the distribution of other goods. Singling out emissions entitlements must be justified by providing a reason for why EE deserve this special treatment. In section 6 we will provide practical reasons for this special treatment. According to Caney, neither do emissions entitlements have the special status of goods that are indeed singled out for separate distribution (as e.g. voting rights), nor can emissions entitlements be associated with specific bundles of goods (Rawls primary goods, Dworkinian resources, etc.), nor with Walzer's (2009, 2012) spheres of justice. Thus, drawing on established theories of ideal distributive justice it is hard to see why the distribution of emissions entitlements matters in isolation: "it does not make sense to refer to *the* fair distribution of greenhouse gases" (Caney, 2012: 271).

Caney underscores his argument by referring to the well-known fact that, in many cases, wide or even narrow²⁶ substitutes for GHG emissions exist. That is, the precise goods that are associated with emissions entitlements can be provided in other ways (by employing renewable energies, adopting energy efficiency measures, changing agricultural practices, changing modes of transport, etc.). In line with his general interest-based theory of justice, what matters to Caney from the moral point of view are the interests that emissions serve. If distributive justice is concerned with the benefits associated with GHG emissions and the interests the benefits serve respectively, we should focus directly on the fair treatment of those interests, Caney argues (ibid. 288-290). Thus, it does not make sense to distribute emissions in isolation from other (important) goods (cf. also Hayward, 2009).

If Bell's and Caney's argument is correct, EE does not even follow from an egalitarian (pattern) resourcist (currency) theory of justice. Recall (P3) saying that "If a global commons is owned by

²⁴ In section 6 *one* way of employing a method of integration is discussed.

²⁵ The most prominent exception is Michael Walzer's (1983) theory of justice.

²⁶ "Wide Substitutability occurs when one substitutes one kind of good with another quite different kind of good without detriment to that person because their overall share of goods remains just. [...] X and Y are substitutes in the narrow sense when X and Y both possess the same kind of properties: for example, they produce the same specific kind of benefit (and have the same kinds of disadvantages) and thus can be used interchangeably to achieve that benefit" (Caney, 2012: 283-284).

everyone equally, the right to use it should (*pro tanto*) be distributed equally amongst all". According to an integrationist position, (P3) has to be rephrased e.g. in the following way:

(P3'') if a global commons is owned by everyone equally, the rights to use it should (*pro tanto*) be distributed such that the currency of justice is distributed equally amongst all (Seidel, 2013: 4).

That is to say, the distribution of emissions entitlements is supposed to level unequal endowments with Rawlsian primary resources, capabilities or whatever metric is used as the currency of justice. Due to the extremely disparate endowments with capabilities, resources, freedoms etc. of the people around the world, distributing emissions entitlements according to (P3'') will not result in an equal distribution of emissions entitlements. Also, it is extremely unlikely that employing any other distributive pattern (prioritarianism, sufficientarianism) would 'accidentally' result in an equal distribution of emissions entitlements. The upshot is that if Integrationism is correct (and Isolationism wrong), EE seems highly unconvincing.

We consider the case for an integrationist approach to be a strong argument against EE. In the following we will critically investigate what can be said in defense of both Integrationism and Isolationism and, hence, EE.

5.1 A libertarian argument in defense of Emissions Egalitarianism?

Moellendorf (2011) discusses different ways to justify EE. After arguing that, *prima facie*, right libertarians, left libertarians as well as egalitarian liberals should endorse EE he engages with Caney's criticism of EE and concludes that Caney provides strong reasons at least for liberal egalitarians to abandon EE. Regarding libertarians he makes the interesting suggestion that: "Many egalitarian liberals will find the objection pressed by Caney relevant, but it is not likely to disturb libertarians who think that the justice of distribution depends on whether they respect property rights, not whether they meet needs" (Moellendorf, 2011: 117). That is to say, if rights trump needs and if EE is based on common ownership of the earth's sink capacity that imply property rights, Caney's criticism may lose its force. The reason is that to libertarians respecting rights matters more than meeting needs and, therefore, it is (*pro tanto*) unjust to violate a person's legitimate right in order to fulfill another person's needs.

If so, it makes sense to treat emissions in isolation from other considerations of global justice, like e.g. poverty.²⁷ If property rights matter more than needs, benefits from using my part of the earth's sink capacity belong to me and are not supposed to make up for the lack of resources of others, or so one might argue along the lines sketched by Moellendorf.

To show that libertarians should be committed to EE, Moellendorf argues that due to Locke's famous proviso, individuals are not free to appropriate as much of the earth's sink capacity as they can (by emitting great quantities of GHG). Rather, total use of the earth's sinks must be limited in order to

²⁷ Caney discusses further potential defenses of Isolationism. We agree that most of these cannot justify this approach regarding emissions entitlements (in detail see 2012, 272-282).

leave “enough, and as good [...] for others” (Moellendorf, 2011: 106). It follows that a cap on total emissions must be introduced. “If a person emits more than the amount that every other can emit without climate perturbations, the proviso has been violated since this leaves smaller shares for everyone else unless climatic perturbations are to occur. According to these Lockean accounts, emissions beyond one’s share of the threshold violate the natural property rights of humanity, whose members own the atmosphere in common” (Moellendorf, 2011: 107).

From the claim that the sink capacity is commonly owned, Moellendorf (2011: 108) jumps to conclusion that “each person has an equal share of the earth’s atmosphere”. The conclusion gains plausibility if it is based on the assumption that the sink capacity is *equally* owned by all. That is to say, an argument is required for why (right) libertarians, who are usually not that concerned with egalitarian distributions, should endorse (P2).²⁸ In this case one might argue that since criteria of just appropriation of resources through one’s own labor does not apply, distributing ownership rights equally remains the only option.

Now, egalitarian ownership can be conceived of in different ways. According to the equal division view, equal ownership of the sink capacity implies owing equal *parts* of the sink capacity (Risse, 2008: 14-15). Risse argues that conceiving of equal ownership as equal division leads to implausible consequences; collective ownership of the earth and/or its resources does *not* imply owning any particular object or part of it (Risse, 2008: 27-28). If this were the case, each individual would owe an equal part of, say, the oil in the ground of Saudi-Arabia. This seems counter-intuitive. Risse argues in favor of a different conception of egalitarian ownership according to which “all co-owners ought to have an equal opportunity to satisfy their needs to the extent that this turns on obtaining collectively owned resources” (Risse, 2008: 13). This understanding of egalitarian ownership, however, implies (P3’) rather than (P3)²⁹ and therefore cannot justify Isolationism.

Perhaps, the earth’s sink capacity is a specific case of common ownership that is different from common ownership of ‘particularly located’ resources such as land, oil, minerals etc. Due to this difference, the argument could continue, common ownership of earth’s sink capacity should be conceived of according to the equal division view. However, such an argument is yet to be made.

Moreover, Moellendorf’s sketch of a libertarian argument in favor of EE faces a second challenge. To us, it is not clear why ownership rights of the earth’s sink capacity trump considerations regarding (basic) needs. The property rights that (right) libertarians are so keen to protect from infringements are different from the right to owe parts of the earth’s sink capacity. As pointed out by Moellendorf himself and others, the sink capacity is not created through investing one’s labor, time, and/or money. The argument that there is no duty to surrender my property to fulfill the needs of others gains force by the assumption that my investments have increased the value of a given natural resource (e.g. converting some piece of land into farm land) and that, perhaps, others even benefit from my converting these resources (they can by the crops I grow). But this is not the case regarding

²⁸ As a reminder: (P2) A global commons is owned by everyone equally. Moreover, one could argue that each individual would owe an equivalent share of the totality of all global commons, rather than of this specific commons. For the reasons provided in section 3 we do not discuss challenges to (P2).

²⁹ While (P3) says that “if a global commons is owned by everyone equally, the right to use it should (*pro tanto*) be distributed equally amongst all”, (P3’) reads “if a global commons is owned by everyone equally, the rights to use it should (*pro tanto*) be distributed such that the currency of justice is distributed equally amongst all”.

the earth's sink capacity; there is no just appropriation *sensu* Locke. Hence, it is far from clear that ownership rights of the sink capacity have the high status (right) libertarians usually ascribe to property rights. But only then does it make sense to treat emissions entitlements in isolation from considerations regarding the fulfillment of (basic) needs.

These few critical remarks are not able to show that a libertarian argument for EE cannot be made. Still, Moellendorf's argument would need more elaboration and in the present form it is not able to defend Isolationism. In the following, we will develop an argument that further undermines the case for Isolationism (and thus strengthens Integrationism).

5.2 An additional argument in favor of Integration: financing adaptation

In the academic debate, as well as in this paper, the discussion regarding integration vs. isolation focused on mitigation and the distribution of GHG respectively. However, other realms of climate change can be treated in an integrationist or in an isolationist fashion as well. Think of adaptation. The IPCC (2007: 869) defines adaptation as an “[a]djustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities”. Although definitions of adaptation differ, they usually refer to the avoidance of climate-induced harms. In a review on financing adaptation Nicole Hartzell-Nichols (2011: 688) writes that “generally, adaptive measures are meant to reduce the harmfulness of climate impacts (climatic changes)”. She later continues “how adaptation is understood depends on who or what we value and who or what is adapting” (Hartzell-Nichols: 689). In particular, it depends on what is considered to be harmful, i.e. how harm is defined.

The standard definition of harm is counterfactual: A is harmed by X, if X makes A worse-off than A would otherwise be (i.e. without the occurrence/action of X). In the intergenerational context, in which climate is situated, the counterfactual conception is vulnerable to Parfit's Non-Identity-Problem (1987: 351–79). According to the Non-Identity-Problem, most people will *not* be made worse-off by climate change than they would be otherwise because climate change is, at the same time, a necessary condition for their very existence.³⁰ This consequence can be avoided by employing a comparative or an absolute conception of harm. According to the comparative conception A is harmed by X, if X makes A worse-off than others are at present. This understanding of harm, however, does not capture well what is meant by adaptation; it would mean that one is harmed by climate impacts if one is made worse-off than others are at present. Instead, the absolute (or threshold) conception saying that ‘A is harmed by X, if X deprives A of what A is entitled to’ is better suited in the context of adaptation. According to this definition, all those are harmed by climate changes that are pushed below a certain threshold by climatic changes. A definition of adaptation based on this understanding of harm reads as follows: “Designing natural and social arrangements so

³⁰ At the heart of the Non-Identity-Problem is the person-affecting view according to which a course of action can be morally wrong only if a particular person will be harmed, i.e. made worse-off. Moreover, the course of action in past and present determines which particular individuals will be born in future. Thus, depending on the course of history, different individuals are born. In a counterfactual world (e.g. one without climate change) other individuals would live. Without climate change I would not exist and, therefore, cannot claim that I would be better-off without climate change (we discuss the possibility to benefit from climate change in Baatz, 2013).

that people are able to cope with climate-related threats and exercise their legitimate entitlements without loss" (Caney, 2009: 127). This is an integrationist definition because a reference to general entitlements is made and what these entitlements are must be determined by a theory of justice. Again, what one is entitled to in terms of adaptation depends on her overall endowment with e.g. resources or capabilities.

An isolationist definition of adaptation must avoid any reference to entitlements or other general considerations of justice such as well-being, rights, etc. An easy and straightforward way of doing so is to say that 'adaptation aims at avoiding that A is made worse-off by climate change'. Unfortunately, this is no solution given Parfit's paradox for without climate change A would not exist and therefore it does not make sense to claim that A is made worse-off by climate change, as highlighted by the Non-Identity-Problem (in detail see Meyer, 2004). But, perhaps, the vulnerability to the Non-Identity-Problem can be circumvented by referring to specific (weather) events rather than climate change as such. Then one can, for instance, define adaptation as 'avoiding that A is made worse-off by a single event caused by anthropogenic climate change'. That is to say, if A is worse-off in t_2 compared to t_1 due to event X, adaptation aims at bringing A back to her condition in t_1 or rather safeguards that A stays in that condition in the first place. This definition is not vulnerable to the Non-Identity-Problem because the harmful single event is not, at the same time, the reason for A's existence. But this definition causes more difficulties than it resolves.

First, in many cases we do not know if and to what extent a single event is caused by anthropogenic climate change. Second, single events that worsen conditions of individuals are often hard to determine or do not exist. Many negative impacts of climate change are long-term and pervasive. Rather than single events, climate changes leads to gradual changes in climatic conditions, ecosystems, natural processes, etc. and puts pressure on social and economic systems. Also, climate change is often just one of many causes of harm or causes harm only in combination with several other incidents and factors. In consequence, in many cases it will be difficult or even impossible to identify a single harmful event caused by anthropogenic climate change. Third, focusing on single events, even if they can be identified, risks adopting wrong strategies by neglecting the 'big picture'. Consider the following example: a region is getting dryer, which becomes manifest in several drought events. Adaptation according to the 'single event definition' would mean to counter each drought by specific measures. Still, approaching the issue from the perspective of a region that will get dryer in the long run (e.g. over the next 100 years) might generate more comprehensive and long-lasting solutions than focusing on each specific drought. The upshot is that it is far from clear what the condition of A in t_1 is that is supposed to be sustained *if no reference to general considerations of well-being or entitlements is made*.

Even if the Non-Identity-Problem and all of the above is not considered, an isolationist approach to adaptation faces a further drawback. In many cases it will not be possible to sustain or restore a given status quo (A in t_1). Think of foreseeable climate-induced impacts on health in developing country B. A reasonable long-term adaptive strategy is to improve the health care system of B. But this will, in all likelihood, not sustain the status quo. On the one hand, improving the health care system will also benefit those not actually or only little affected by climate change. On the other hand, although an improved health care system will *ex hypothesi* be able to improve conditions of those negatively affected by climate change, these individuals might still be worse-off compared to a

counterfactual situation without negative climatic impacts. Thus, while some citizens will still be worse-off than in the counterfactual situation, others will be better-off. Now, according to the entitlement definition of adaptation³¹, the adaptive strategy in this stylized example is successful for it is able to avoid most suffering *ex hypothesi* (most people are not pushed below the threshold). But, according to counterfactual conception (adaptation aims at avoiding that A is made worse-off by climate change), the same strategy is much less successful for it is not able to sustain the status quo. This latter assessment, however, seems counter-intuitive.

If these arguments are correct, we have presented a robust case in favor of an integrationist understanding of adaptation.

5.3 Intermediate conclusion

Reasons so far brought forward in defense of both Atomism and Isolationism are either unconvincing or, at best, highly contested.³² If this is correct, (P3) should be rejected. The above argument cannot justify EE.³³ That is to say, EE fails as an ideal principle. Ideal principles determine what “ought ideally to occur from a moral point of view” (Shue, 2014: 334). Ideals can be realized only by way of approximation. Approximation to an ideal situation can be reached by strategies which Henry Shue has dubbed “extrication ethics”: “Philosophers and political theorists have written little about what might be called principles for transitions. [...] Normally, we are offered an ultimate ideal and, in effect, wished good luck in figuring out how to reach it. I think this is lazy and irresponsible, but transitions are hard, intellectually as practically. [...] I think that extrication ethics largely constitutes transition ethics” (Shue, 2014: 129).

Approximation can be either more direct (“*intentione recta*”) or more indirect (“*intentione obliqua*”). On a direct route, one tries to specify and apply ideal principles under real world conditions. Caney has recently made a proposal how to distribute emissions entitlements under real world conditions starting from an ideal (holist-)integrationist position. On an indirect route, one tries to move towards the ideal by using different concepts or principles. If EE fails as an ideal principle, it might still be possible to defend EE on practical grounds as part of a more indirect approximation.³⁴ We think that extrication ethics is possible on both routes. On both routes, however, practical considerations must be accounted for and EE looks much more promising when compared to real world procedures that include practical considerations. The last section will therefore compare EE with Caney’s most recent proposal for a modestly integrationist method of emissions allocation.

³¹ “Designing natural and social arrangements so that people are able to cope with climate-related threats and exercise their legitimate entitlements without loss” (see above).

³² Isolationism abstracts away non climate change related human suffering. Isolationists would have to show under which conditions such abstractions are morally permissible. This would require a closer look at the overall ethical design of (ideal) theories of global justice. Such debate is beyond the scope of this article.

³³ Many thanks to Christian Seidel for suggesting to state this clearly.

³⁴ A similar approach is endorsed by Rudolf Schüssler (2014) who defends EE in a “second-order perspective” via focal choice.

6. The virtue of simplicity: a practical argument in favor of EE?

Before actually comparing both approaches it is necessary to briefly introduce Caney's proposal.

6.1 Caney's five-step procedure

A first argument regarding practicality simply denies that an integrationist approach is possible at present: COP negotiators have no choice but to decide on how emissions entitlements are distributed in isolation. It is certainly true that emissions must be distributed while other goods are not up for (re-)distribution. But when deciding on the distribution of emissions entitlements endowments with other goods can be *considered* (cf. Caney, 2009, 2012).³⁵ This reply, however, provokes a further challenge: distributing emissions so as to make up for all other unjust circumstances will overburden COP negotiators and lead to deadlock (cf. Meyer/Roser, 2006: 239). In reply, Caney (2012: 278, 292) proposes a moderate integrationist approach: instead of a maximal account of justice, COP negotiators can endorse a minimal account, which only seeks to identify what is absolutely essential. That is to say, only those things are considered that are relevant for the fulfillment of, say, basic needs. Thereby, it is possible to sidestep disagreement about maximal accounts of justice and political opposition that the employment of a maximal account, such as e.g. global equality of opportunity or a global difference principle, would face (Caney, 2012: 278).

Thus, to avoid the criticism that a wholly integrationist approach (taking *all* considerations into account that matter regarding global justice) is completely unworkable under real world constraints, Caney proposes a moderately integrationist approach. In combination with Caney's holist position, (P3) can be expressed as follows (*holist-integrationist minimal-justice view*):

(P3''') If a global commons is owned by everyone equally, the costs related to its use and maintenance should be distributed so as to meet the basic needs of all current and future persons.

How could an allocation according to (P3''') within a global climate treaty look like? Caney proposes a five-step procedure to allocate emissions according to an integrationist minimal justice position.³⁶ To this, one would have to add the holist element, i.e. say something on how costs for adaptation (and rectification) are to be taken into account. Given that this would probably make the procedure more complex but certainly not less complex, our below arguments concerning practicality will not be undermined by adding the holist element. Caney's proposal is as follows:

In step 1 (The Normative Starting Point) one adopts a set of principles of intra- and intergenerational justice that determines what people are entitled to as a matter of justice (according to a minimal

³⁵ Indeed, such a procedure is demanded by (P3') saying that 'if a global commons is owned by everyone equally, the rights to use it should (*pro tanto*) be distributed such that the currency of justice is distributed equally amongst all'.

³⁶ This is just one way of realizing a method of integration. Elsewhere, Caney proposes to adopt a scheme in which emissions entitlements are allocated via a global auction as proposed by Tickell (2008) and Barnes et al (2009). The scheme faces none of the difficulties discussed below (cf. Baatz, 2013) but belongs in the realm of political utopias at present.

account). In step 2 (The Sustainability Condition) “one must assess whether the account of distributive justice affirmed in Step 1 makes demands on the natural world that can in fact be met” (Caney, 2012: 293). Step 2 is required due to the interdependence between an account of justice and the environment: on the one hand, the realization of any account of justice requires using natural resources and might create environmental hazards; on the other hand, the realization of principles of justice requires that certain natural resources are available and that certain hazards are absent (in detail see Caney, 2012: 293-295).³⁷ Step 3 (The GHG Implication) determines what step 1 and 2 imply for the distribution of emissions entitlements: how to distribute them in a just and sustainable society? This can be achieved by looking at peoples’ entitlements in different sectors (e.g. food, health, housing, education) and determining the amounts of GHG required to fulfill these: “By identifying persons’ entitlements and then their implications for the use of GHG emissions one can then derive an account of how GHG emissions should be distributed” (Caney, 2012: 297).

Depending on circumstances, entitlements can be met in other ways if (narrow) substitutes for GHG emissions exist, as noted above. Therefore, realizing peoples entitlements may be compatible with a variety of different distributions of GHG emissions (Caney, 2012: 298). This is step 4 (The (Narrow) Substitutability Proviso). Due to this indeterminacy a fifth step is required (Indeterminacy and the Role of Institutions). Within a political process at different levels “participants can select from the various different combinations available and agree among themselves precisely how people’s entitlements are secured. The only way to move from the multiple possible combinations that are thrown up by Step 4 to any specific outcomes is to have political processes in which the relevant parties decide what particular combination of natural resources will be employed in order to realize people’s entitlements (as determined by Steps 1 and 2)” (Caney, 2012: 298).

6.2 Comparing Emissions Egalitarianism with the five-step procedure³⁸

Ethics is supposed to guide actions as well as societal praxis. Therefore, issues concerning practicality/feasibility are an indispensable part of ethical all-things-considered judgments; they are not just an add-on to an already completed ethical analysis. This is even more important when dealing with transition or extrication ethics as introduced above. In consequence, besides its justness the feasibility of a procedure matters. However, feasibility is a complicated and thorny issue that is often dealt with in problematic ways. To avoid at least some of these problems, we distinguish between institutional and political feasibility. Institutional feasibility is concerned with how well a proposal corresponds to existing institutions and how easily it can be implemented given current institutions. Political feasibility refers to the political will to implement a proposal. Here questions such as ‘how likely is it that political decision makers will agree on proposal X?’ are relevant. Needless to say, from the moral point of view the proposal should be just. If one endorses the minimal justice view employed above, a situation is just in which all human beings are able to fulfill their basic needs.

³⁷ In her Ph.D. thesis, Lieske Voget-Kleschin (2013) discusses the interdependence between an account of justice and the environment at length; see also Voget-Kleschin (2013, 2015).

³⁸ This comparison would warrant a paper on its own. Our aim here is to roughly sketch how EE could be defended.

Justice, institutional and political feasibility are three incommensurable categories. For instance, higher political feasibility does not make a proposal more just and the other way around.³⁹ Incommensurability implies that the 'ranking' in one category cannot be set off against the other categories (e.g. saying that a score of 10 regarding justice and 5 regarding feasibility yields an overall score of 7.5 is not possible). Rather, a proposal should fare well in each category; and if its assessment in one category is very bad it should not be pursued (a very unjust or institutionally/politically hardly feasible proposal is not worth pursuing – as long as this assessment holds true). Obviously, this will only allow for a rough comparison. But anything more detailed would not make much sense given the comparatively indeterminate criteria, particularly concerning political feasibility. We will now discuss how EE and the five-step procedure fare in each category.

Justice

To cut a long story short: if one thinks that climate change is a matter of global justice, and if one thinks that established theories of (global) distributive justice matter in order to determine what people around the world are entitled to, the five-step procedure is more just than EE. We think that this follows from our above discussion – although much more could be said on this.

It matters for the comparison, though, whether or not the five-step procedure is much more just than EE. We claim that it is not, or rather: we disagree that EE results in a “possibly very unjust” allocation (as one reviewer put it).

First of all, an equal distribution of emissions entitlements might actually be sufficient to fulfill basic needs of all or almost all human beings. Whether or not this is the case depends on how big the overall carbon budget and on how minimal the account of justice is. The more ambitious the account and the smaller the budget the more unlikely it is that EE will meet the demands of (minimal) justice.

In this respect it should be noted that the substitutability of emissions generating activities highlighted by Caney in order to reject an isolationist view also is a reason for why EE might not be that unjust at all. Representatives of some developing countries are keen to point out that they have a right to development as recorded amongst others in the UNFCCC. And EE would probably not allow them to go for industrial development as currently taking place in China. But emissions are just one means amongst others to reach development goals. In principle, these can be reached without generating high emissions. The fulfillment of basic needs can be accomplished by employing renewable energies, energy efficiency measures, and the like. For sure, developing countries would need more technical and financial assistance by developed countries to realize such developmental trajectories. But it is not true that EE as such does not allow for fulfilling (basic) needs of the citizens of developing countries.

Moreover, the extent to which development necessarily results in high emissions also depends on one's understanding of development. As Amartya Sen (2001) and Martha Nussbaum (2007) have argued for decades, what matters is not economic growth but the freedom to realize certain functionings. This is not necessarily linked to high emissions. By way of example, in 2011 the United Nations Developmental Program (UNDP) published a report which investigated the relation between

³⁹ We are currently working on a more elaborated set of criteria.

carbon dioxide emissions per capita and the Human Development Index, a composite index combining indicators of life expectancy, educational attainment and income. The report concluded that the association between carbon dioxide emissions per capita and the components of the HDI “is positive and strong for income, still positive but weaker for the HDI and nonexistent for health and education” (UNDP, 2011: 25). The important upshot is that EE is not *necessarily* in conflict with a modest Integrationism that Caney argues for.

Finally, EE in itself would indeed be unjust in that it ignores past emissions and climate change impacts respectively. However, we have argued that EE (in the form of C&C) ought to be combined with a scheme of financing adaptation that comprises a polluter pays and a beneficiary/ability pays component (Ott/Baatz, 2012; see section 4). This renders EE much more just overall.⁴⁰ If EE plus such an adaption scheme would be implemented this would be a huge improvement compared to the status quo and would make the world much more just. And EE would certainly improve the situation of the poor. As said, the five-step procedure would result in an even more just distribution of emissions entitlements. However, compared to the current extremely unjust distribution of goods as well as *de facto* emission entitlements the difference seems rather small.

Institutional Feasibility

Compared to EE, the five-step procedure is extremely complex. We will first highlight the complexity by mentioning three aspects and then say why we think that this is a problem.

First, as explicitly acknowledged by Caney, if the account of justice (step 1) violates the sustainability condition (step 2), the account must be revised until step 1 and 2 are compatible. For instance, the amount of emissions entitlements that is available today must be limited in order to not violate other entitlements of future generation. However, how much emissions entitlements are actually needed to fulfill current individual’s other entitlements becomes clear only after step 3 is accomplished. It may turn out that fulfilling the entitlements established in step 1 requires more emissions than available according to the sustainability condition (step 2). In this case, the account of justice must be revised and the whole process (steps 1-3) must be repeated.

Second, the five-step-procedure starts as a derivative approach but ends up in pointing to “decisions of relevant parties”, as stakeholder-approaches do. It will be a highly contestable issue how much emissions entitlements are required to meet (basic) needs in different circumstances. Emissions entitlements cannot be derived in any logical sense but require value judgments regarding the amount of emissions needed for “decent” housing, “necessary” transport, “appropriate” health care, etc. How many emissions are required also depends on the availability of substitutes (see above). To what extent substitutes exist and how (narrow) these are adds another contestable issues. Furthermore, all these issues must be discussed and agreed upon in an inclusive way. And in some

⁴⁰ Note that this is not an ad hoc supplement but rather points out that EE must *and consistently can* be combined with a scheme that deals with adaptation and rectification. Note also that such a scheme must either be added to the five-step procedure as well or costs for adaptation and rectification must somehow be integrated in the procedure (see above). We are thus not comparing apples and oranges.

cases it might even be impossible to agree on a principled and clear allocation of emissions entitlements.⁴¹

Third, these political processes “at different levels of governance” face a trade-off. The more local the processes are, the better one can decide on how to best fulfill peoples’ entitlements. Assuming that every regional unit wants more rather than fewer emissions entitlements, allocating too many emissions (i.e. exceeding the overall emissions budget) is a likely outcome of many local processes. This can be avoided by determining upfront which regional unit gets how many emissions entitlements. But deciding globally on how many emissions are needed in each region will involve substantial generalizations. Thus, while top-down approaches must rely on quite general assumptions, bottom-up approaches risk allocating too many emissions. A solution for this trade-off might be a mix of top-down and bottom-up approaches that are harmonized to the extent possible. Again, this will be a rather complex endeavor.

The five-step procedure is in need of huge information input, particularly regarding steps 3 and 4. This in turn requires transparent data generation and collection but the intuitional capacities to do so are currently lacking in many regions. Also, we doubt that the procedure yields acceptable outcomes in all those regions lacking accountable and democratically legitimized institutions. On the other hand, complexity might not be a problem for the reiterative process of step 1-3 “is an intellectual exercise, looking for reflective equilibrium. [...] That this system has feedback loops [...] seems [to be] an advantage” (anonymous reviewer’s comment). But Caney’s proposal is certainly not just an intellectual exercise but at the same time a real world allocation procedure. It must come to an end within a reasonable timeframe. If undertaking steps 1-3 takes a couple of years (which we think is an optimistic assumption) it is somewhat problematic to repeat this process two to four times given the urgency of the topic. More importantly, political representatives and citizens must be able to comprehend and perhaps conduct the procedure themselves in order to make reasonable decisions. But the technological, political, and philosophical problems involved are huge. Caney’s method introduces highly contested and contestable issues (reasonable disagreement) into climate negotiations. Such disagreement is convenient to governments who oppose a robust mitigation regime. Moreover, the extraordinary complexity of these issues would overburden current COP negotiations and probably the political processes mentioned in step 4.⁴²

We do not see that the current global governance system is capable of implementing Caney’s procedure in an adequate manner. Compare this with tax systems: we believe that a general income tax of, say, 20% would be less just than the current complex German progressive tax system that tries to account for real world differences between individuals. To take all these differences, special cases and exemption into account requires a rather complex system of accounting – and a huge

⁴¹ Think of mobility needs in the USA: to what extent is it justified to visit close relatives by plane that live on the opposite coast? To what extent is one allowed to use the car in a remote rural area? And although individuals only have very limited possibilities to influence the mobility structures surrounding them, the federal and state governments can be blamed to a certain extent for this. How many emissions entitlements do inhabitants of a remote village get?

⁴² We acknowledge that Caney’s proposal actually corresponds to political realities: at COP negotiations a method of increasing integration can be witnessed as more and more issues are dealt with that a global climate treaty is supposed to govern. In consequence, negotiations are getting ever more complex. We are under the impression that the increasing complexity is one additional reason for the current COP-failure.

bureaucracy. If proper institutions are missing, complexity is a problem. EE faces none of these problems due to its simplicity.⁴³ Our general point is that the epistemic demands made by an integrationist method are much higher and difficult to fulfill at present.⁴⁴

Political Feasibility

So far, Caney has not commented on the issue of complexity. He has, though, claimed that an additional advantage of this approach is its greater flexibility *and* political feasibility: “since meeting people’s [...] needs can be done in more than one way, it offers those who are responsible for providing energy (and food) more freedom than do alternative approaches such as the equal per capita approach. Second, [...] it may, for example, allow some to have higher emissions than would otherwise be the case, if they generate high amounts of clean technology for others and enable others to boost their energy efficiency. This renders it more politically realistic” (Caney, 2012: 298).

We disagree. We think that EE is more flexible than Caney’s statement suggests and that the flexibility of Caney’s approach is a drawback rather than an advantage.

On the alleged rigidity of EE: First, EE makes most sense to us if implemented as part of a cap and trade system; that is to say, EE is the initial allocation within a system of tradable emissions entitlements. Allowing for emissions trading would increase the flexibility of EE and would generate income to poor persons with low emissions. Surely, a global trade system is still a long way off. At least in the EU a trade system already exists. Our point is that the more EE is combined with emissions trading, the less rigid it is and the more integrationist it becomes. Second, EE can account for the aspects raised by Caney. Rather than prescribing a rigid allocation rule, EE may function as a yardstick that allows for deviations. If country A provides renewable energies to country B or directly pays for mitigation measures in B this can be taken into account by granting A more emissions entitlements than what would correspond to A’s equal share. Note that this kind of deviation refers to accounting issues that pertain to all approaches (as discussed in section 3); they are thus different from claims for more emissions entitlements based on ‘special needs’ that would open Pandora’s box. Also, one can deviate from an equal distribution as a concession to political realities. For instance, COP negotiators might agree on giving country C and D more than their equal share in order to gain their consent. This, however, would not mean to abandon EE as a yardstick.

On the flexibility of the five-step-procedure: Caney is right that his procedure leaves more room for negotiation amongst COP parties compared to EE. We consider this to be a drawback rather than an advantage, though. One problem is that the flexibility introduces a great deal of complexity, as argued above. In the above paragraph we argued that EE can function as a yardstick that might allow

⁴³ We conceive of EE as splitting the total emissions budget equally amongst all living human beings. If the budget shrinks, equal shares will be smaller as well (time slice view). We do not endorse a ‘whole lives view’ according to which emissions entitlements are to be equalized over a person’s lifetime for this would add substantial complexity to EE. Thanks to an anonymous reviewer for requesting clarity on this point.

⁴⁴ “The whole point of integrationism is that A’s relatively (i.e. as compared to B) greater endowment with one good (e.g. emissions) may be justified if A has comparatively (i.e. as compared to B, C or D) less of other goods (e.g. money) – such that A has a fair share of good G if and only if the overall distribution of all relevant goods across all persons is fair. So, to determine a person’s fair share in an integrationist fashion we have to [...] include information about the overall endowments of (all) other persons with (all) other goods” (Seidel, 2014: 40).

for deviations. Now, the other problem of the five-step-procedure is that the *yardstick itself is up for negotiation* (and bargaining): what people are legitimately entitled to in terms of emissions must be determined in political processes. The less fair these processes are, the more successful unjustified claims for legitimate entitlements will be. And the more complex and contested an issue is, the easier it is to pass off unjust positions as just. To us, this kind of indeterminacy is a clear drawback with respect to COP negotiations. The high flexibility opens the door to arbitrariness under current real world conditions. That is to say, increased political feasibility may come at the price of a (substantially) less just outcome.

Another point concerning political feasibility should not go unmentioned. If the five-step procedure is taken seriously, wealthy high-emitters will get even less emission entitlements than in case of EE. The core idea of Integrationism is to take overall endowments into account. Those endowed with many other goods will get fewer emissions in most cases (for they have other means to fulfill their basic needs). Thus, the procedure will result in an even more radical redistribution of emissions entitlements compared to EE. Wealthy high-emitters will resist this even more fiercely than they currently resist anything going in the direction of EE. An egalitarian distribution is a focal point in negotiations in that (poor) low emitters would substantially gain from EE while this is something (rich) high-emitters must minimally concede (cf. also Schüssler, 2014). If EE seems politically unrealistic at present, the political feasibility of the five-step procedure is even lower.

Summary

The five-step procedure would make the world even more just than EE but it is less politically feasible. If the feasibility of the former is increased by opening up the determination of basic needs to real world bargaining processes, the outcome would be less just. Under current circumstances the institutional feasibility of the procedure is very low. Institutional capacities for its proper implementation are lacking and it would fall prey to current power asymmetries and intransparent institutions. We will outline in the conclusion what this means for EE and the five-step procedure respectively.

7. Conclusion

We have argued that the global commons argument for EE fails. If one wants to defend EE, one must do so on practical grounds. We have hinted at how this can be done. Compared to Caney's five-step proposal EE is less just but marked by higher political feasibility and much higher institutional feasibility. If facing the choice between EE and the five-step procedure, our recommendation to political decision makers is to go for EE plus an adaptation scheme.

Several things must be noted though. The arguments presented in section 6 are supposed to start a debate rather than offering conclusive proof for our position. Moreover, both our aim and results are limited in that we compared EE to just one other proposal (although there are not that many proposals out there at present). Apart from criticizing our arguments one could also propose a simpler integrationist procedure, for instance. Last but not least, part of our conclusion is that the five-step procedure, if followed as envisioned by Caney, would result in a more just distribution of

emissions entitlements. Feasibility is not a static or given phenomenon but can be influenced. Politicians can be voted out of office (in some countries) and institutions can be set up and reformed. We conceive of EE as a first step towards a more just world and a global redistribution of entitlements that provides the poor and voiceless with more (bargaining) power. EE can function as capacity building for more complex allocation procedures. It can help in striving towards more legitimate and capable regional as well as global institutions as part of an “extrication ethics”.

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