

## How demanding is our climate duty? An application of the no-harm principle to individual emissions

**Augustin Fragnière**  
University of Lausanne  
Switzerland  
[afragne@gmail.com](mailto:afragne@gmail.com)

### Abstract

This article provides theoretical foundations to the widespread intuition that an individual duty to reduce one's carbon emissions should not be overly demanding, and should leave some space to personal life projects. It does so by looking into the moral structure of aggregative problems such as climate change, and argues that contributing to climate change is less wrong than causing the same amount of harm in paradigm cases of harm doing. It follows that strong agent-relative reasons, such as consideration of the agent's most important life projects, are likely to sometimes outweigh the reasons for refraining from contributing to climate change, especially when there is no alternative course of action. This, however, does not mean that individual carbon emitters are off the hook, since a lot can be done to reduce carbon emissions without jeopardizing one's most important life projects.

**Keywords:** Ethics, Climate Change, No-harm principle, Individual duties, Demandingness.

**Word count:** 8904

## 1 Introduction

Experts have been warning for decades about climate change and its great potential for harm. Its expected consequences, to mention but a few, include sea-level rise, more frequent and extreme weather events (such as heat waves, floods or hurricanes), a decrease in crop yields, and the spread of infectious diseases (IPCC 2014). These effects already affect negatively humans and non-humans across the globe, and will very likely get far worse in the coming decades and centuries. This gives to climate change an important normative dimension. For instance, writers have argued that these consequences will result in human rights violations (in particular the rights to life, health and subsistence), and that it suffices to ground a strong moral obligation to prevent the worst consequences of climate change from unfolding (Caney 2009b; Bell 2011). More generally, there is widespread consensus about the need to act swiftly to reduce anthropogenic greenhouse gas (GHG) emissions, in order to mitigate, as much as possible, the warming of the global climate.

In the face of this threat, many (but not all) philosophers writing on the issue reckon that individuals in western societies have at least some duty to reduce their carbon footprint, even in the absence of a national or global scheme requiring them to do so (for a review see Fragnière 2016).<sup>1</sup> What is less clear, however, is how demanding such a duty is supposed to be. On the one hand, there is widespread intuition that individuals cannot be asked to sacrifice all their life prospects for the sake of reducing their carbon emissions. On the other hand, if one takes seriously the negative duty not to harm others, climate change data seem to indicate that we do

---

<sup>1</sup> There are other climate duties such as the duty to promote collective or political action and the duty to help or compensate the victims of climate change. I will not discuss these duties here.

have a pretty stringent duty to minimize our personal emissions. The prospect of climate impacts is so grim that any duty falling short of very ambitious demands would seem out of step with the urgency of the situation. In other words, two moral intuitions are conflicting here. One says that morality cannot demand too much sacrifice from individuals, whereas the other points to the utmost importance of fighting climate change (Berkey 2014).

The current state of the literature on this issue reflects this ambiguity. Some writers argue that individuals have no duty to reduce their GHG emissions (Johnson 2003; Sinnott-Armstrong 2005; Sandberg 2011; Maltais 2013), whereas others defend a very stringent duty to do so (Broome 2012; Berkey 2014).<sup>2</sup> However, most writers try to find a middle ground, acknowledging the existence of a duty to reduce one's emissions, but limiting its extent to some conception of "reasonable sacrifice" (see for example Raterman 2012; Fruh and Hedahl 2013; Baatz 2014). Even though I am sympathetic to these middle ground positions, I think that they often lack a compelling justification. Indeed, if the consequences of climate change will be so dire, how come we have no moral obligation to do more than that? This is what I am going to explain in this article. I will argue that individuals do have a duty to reduce their carbon footprint, but that this duty is limited (although not necessarily weak) due to the moral structure of collective harm problems. Hence, the general aim of this article is to provide a theoretical rationale to a widely-shared intuition.

In what follows, section 2 sets the wider context of the topic, that is the debate over demandingness, section 3 shows that applying the no-harm principle straightforwardly to personal emissions would seemingly lead to very demanding duties, section 4 explains that in

---

<sup>2</sup> Even though Broome argues that individuals should stop emitting altogether, the stringency of the duty is strongly mitigated by the fact that he endorses carbon offsetting.

fact contributing to climate change is less wrong than harming people in paradigm cases, and section 5 argues that it leads to a duty to reduce one's carbon footprint that is less demanding than expected.

## 2 The demandingness problem

The anti-demandingness intuition claims that morality can only demand so much from moral agents. Individuals are entitled to have a life of their own, with their own projects, and an overly demanding ethical theory would leave no room for the fulfilment of these life projects. Hence, there must be some kind of balance between the requirements of morality and the ability to pursue one's own plans.

Traditionally, the target of demandingness objections has been consequentialism (Williams 1973; Scheffler 1982). However, a way to frame the problem that goes beyond consequentialism is to distinguish between negative duties, that is duties not to harm others, and positive duties, that is duties of beneficence. Whatever the moral source of these duties (be it some version of consequentialism or a set of deontological rules), it is traditionally assumed that positive duties, if there are only loose limits to their application, are much more demanding than negative duties. Peter Singer provides an especially striking example of that in his seminal article on our duty to aid the global poor, when he writes: "if it is in our power to prevent something bad from happening, without thereby sacrificing anything of comparable moral importance, we ought, morally, to do it" (Singer 1972, 231). First, given the very poor conditions in which a lot of people are living today, it is plausibly the case that we have many more opportunities to help, in our daily lives, than to simply avoid harming people ourselves. Second, helping is usually considered time and resource consuming. Whereas not harming involves only simple attitudes of restraint,

such as refraining from hurting, killing or stealing people, the argument goes, beneficence requires individuals to take an active role and to divert resources that were initially devoted to other projects. As a result, accepting positive duties without stringent limits on them risks drowning moral agents in a “sea of obligations” (Schmidtz 2000).

However, the state of the world, and its functioning, have changed dramatically in the last decades, and it does not seem to be true anymore that the problem of demandingness applies to positive duties only. The world is much more crowded and interconnected than it used to be, and it is now obvious that refraining from harming others is much more demanding than just avoiding to hurt the people around us. Contemporary life comprises a whole host of seemingly trivial daily activities that might contribute to harming distant strangers (no to mention animals and ecosystems). Eating certain types of food, buying clothes, heating one’s house, driving to work, travelling to distant countries, and so on. There is almost no daily action that is not under scrutiny (and rightly so), because of the impact it could have on harmful global processes such as the perpetuation of unfair working conditions, economic hardship or various environmental problems. As Judith Lichtenberg puts it: “because these activities are seamlessly woven into our normal routines, ceasing to engage in these ‘New Harms’ is not at all easy – not simply a matter of refraining from things we never would have dreamed of doing in the first place, like killing and raping and robbing. Not harming people turns out to be difficult and to require our undivided attention” (Lichtenberg 2010, 558).

In light of this analysis, it seems indeed as though most of our life projects would be doomed if we applied straightforwardly the duty not to harm others to our everyday actions. The current situation seems to leave us with two possibilities. Either morality is indeed that uncompromising and most of us live in a constant failure to live up to our own ethical standards, or there is a way

to justify some limit to the applications of the no-harm principle. My aim is to provide a justification for the second option, in the specific case of climate change.

### 3 Harm prohibition, demandingness and climate change

The *no-harm principle*, enjoining us not to harm others unnecessarily, is often viewed as a core component of human morality, across time and culture. Since climate change is a man-made phenomenon that has a huge potential for harm across generations, it seems to be a natural candidate for an application of the principle (Shue 2014; Rentmeester 2014). However, in its traditional form, the no-harm principle is a very stringent principle leaving very little leeway to individual agents in how to prioritize their goals. When significant harm is brought about and alternative courses of actions are available, the cause of the harm has to stop entirely. As Henry Shue puts it: “Few questions of fairness arise with regard to stopping to inflict damage. If one is causing damage, one ought, *barring strong reasons to the contrary*, to cease it entirely as promptly as possible” (2014, 5 emphasis added). As we will see now, this could potentially lead to very demanding duties if it is applied straightforwardly to the case of individual GHG emissions.

In order to debunk the widespread idea that personal GHG emissions are so ridiculously small that they cannot meaningfully affect the way climate change unfolds, a few writers have tried to put numbers on individual contributions. The result is that, at first glance, the harm brought about by individual emissions is much larger than one might think. It is so because, even though personal GHG emissions are only a tiny fraction of the total amount emitted globally each year, the consequences of climate change over the long term will be so dire that even this tiny fraction

amounts to significant harm. The most famous example of this is John Nolt's calculation. Nolt claims that the lifetime emissions of the average American represent one two-billionth of the greenhouse gases emitted from the dawn of the industrial revolution to 2040. This is surely a very small fraction, but the harm brought about by climate change is so huge that it nevertheless corresponds to *the death or suffering of two future people* over the next millennium (Nolt 2011). From this perspective, individual contributions to climate change are indeed all but morally insignificant.<sup>3</sup> What sort of duty can we infer from this calculation? Certainly, an application of the standard no-harm principle would justify a very stringent duty to prevent these two future deaths as well as other climate-related damages.<sup>4</sup>

Technically, and other moral considerations put aside, complying with this duty means that individuals have to reduce their GHG emissions down to the level at which no more harm is caused (their emission budget). Unfortunately, even if we assumed universal compliance with this duty, it seems that personal emission budgets would be painfully low, especially for affluent people.<sup>5</sup> The IPCC made it clear that in order to have a decent chance of staying below +2°C of warming, humanity has a very tight carbon budget of one trillion tons of CO<sub>2</sub> (that is 20 years at current emission rates), and that GHG emissions must be taken down to zero by the end of the century (IPCC 2014). Moreover, given that humanity is currently emitting way above the absorption capacity of marine and terrestrial ecosystems, each supplementary amount of GHG

---

<sup>3</sup> Similarly, John Broome maintains that the lifetime GHG emissions of a westerner will "wipe out more than six months of healthy human life". He also gives an evaluation of the monetary value of the harm caused by the lifetime emissions of a rich country resident. According to the social cost of carbon as calculated in the Stern Review, it ranges between \$19'000 and \$65'000 (2012, 74). Avram Hiller argues that individual emissions are morally significant even if we focus on individual actions rather than lifetime emissions. He calculates that a Sunday ride in an SUV is the moral equivalent of "ruining someone's afternoon" (Hiller 2011, 21).

<sup>4</sup> Throughout this article, I will assume that it is possible to harm future people. Even though I cannot discuss it here, I think that it is plausibly the case if one adopts a threshold conception of harm (see Meyer 2003).

<sup>5</sup> The discussion of individual emission budgets is in fact complex, because matters of past emissions, responsibility and justice come into play. An important question in that respect is whether GHG emission rights should be distributed for their own sake or in connection with other entitlements such as basic human right or capabilities (Caney 2012; Baatz 2014).

emitted makes the problem worse (i.e. brings about more harm). Hence, from a strictly individual point of view, and given that non-compliance is the norm, the only way to stop contributing to harm causation rapidly is to virtually stop emitting, which, for most people, is extremely challenging if not impossible.<sup>6</sup>

However, as we just saw with Henry Shue, “strong reasons” could possibly exempt individuals from radically slashing their GHG emissions. So, what could these strong reasons be? Traditionally, considerations of *control* and *cost* are mentioned in order to mitigate the stringency of a duty.

Arguments from control usually stem from the widely cited Kantian proviso “ought implies can”, meaning that no one can have a moral obligation to secure a result that is not under his control. In other words, individuals cannot have a duty to act in a way that is not available to them. Various writers have argued that this proviso applies to personal GHG emissions, because in the context of contemporary societies, individuals often lack control over the factors that influence their lifestyle (Aufrecht 2011; Cuomo 2011). For instance, the CO<sub>2</sub> content of the electricity we use to light and sometimes heat our houses depends on structural factors over which individuals have little influence. Also, in a city where public transportation is very minimally developed, one might not have any other choice than driving to work. Thus, the argument goes, individuals cannot be blamed for the parts of their carbon footprint over which they do not have full control. However, this argument is not totally convincing because individuals do in fact have control over

---

<sup>6</sup> Climate neutral emissions, such as breathing or burning sustainably grown biomass, could be tolerated though, since they are not of fossil origin and do therefore not contribute to climate change. Indeed, emissions are said to be *climate neutral* when the atoms of carbon forming them have been previously (i.e. in the last few years to decades) removed from the atmosphere. For instance, the carbon dioxide we exhale when breathing has been previously captured in the air by the photosynthetic activity of the plants we eat, and does thus not increase the atmospheric CO<sub>2</sub> concentration. This reasoning applies to the burning of biomass only insofar as it is replaced by new plants or trees.

most of their carbon footprint. If one has a sufficiently stringent duty to stop emitting, one still has the possibility to stop consuming fossil energy altogether. In other words, one can always stop lighting and heating one's house, or stop commuting to work. The strong intuition that it would be wrong to require such sacrifices from individuals does not stem from the fact that they do not have control, but rather from the very high cost of complying with such duty. As a result, the control condition does not seem to apply to most of our personal carbon emissions, but only to those that we are really unable to get rid of ourselves (see also Frierson 2014). This incompressible part of our carbon footprint probably boils down to only the GHG emissions of a country that are necessary to run its main collective institutions and infrastructures. These "public emissions" have to be shared out among all the citizens, but are not directly tied to their individual behaviour and consumption activity (even though even this is debatable, since individual behaviour changes may influence the behaviour and consumption choices of others and of the community (see Hourdequin 2010)).

The cost condition, on the other hand, is directly related to the debate over demandingness. As already mentioned, the basic idea is that there are limits to what morality can ask from individuals. The idea of cost can take different meanings, but a useful way to frame the notion is to define it as a setback of interest falling on the moral agent. This can potentially refer to a whole gradation of setbacks, from the loss of fundamental interests, such as the human rights or basic capabilities of the moral agent, to the abandonment of personal projects, to more trivial inconveniences. So, when Henry Shue writes that we ought to avoid causing harm to others "barring strong reasons to the contrary", he likely means that very serious cost, compared to the harm done, might excuse the agent for not complying with his duty. It seems indeed rather

common-sense that I cannot be asked to give up my basic rights in order to avoid causing you a small temporary inconvenience. Thus, even the most stringent applications of the no-harm principle will allow for some considerations of cost. However, these considerations will often take the form of a balance between the moral importance of the sacrifice the agent has to make and the moral importance of the harm that is avoided.<sup>7</sup> Furthermore, since the no-harm principle sees the infliction of harm to others as especially wrong, morally speaking, it is likely that more weight will be given to the harm falling on the victim. In other words, the cost of complying must be very serious compared to the harm done, for the agent to be excused from complying (more on this later).

What can we infer from that in terms of personal GHG emissions? Obviously, applying the no-harm principle, so understood, to the case of climate change will lead to very stringent individual duties. If we take Nolt's calculation at face value, what kind of personal cost could possibly exempt agents from reducing their carbon footprint almost completely? In other words, what could possibly justify causing the death of two future persons? Probably not much more than the entitlement to bare survival or to the most basic human rights (and even that, as we will see, would be controversial), but surely not the need to go to work or to be comfortably warm in one's house. For instance, if the exhausts of my car were by themselves killing two persons, I would surely have a stringent duty to stop driving immediately, no matter what I need my car for. So, the most plausible conclusion would certainly be that individuals have to stop emitting almost completely right now, no matter what it takes. This goes far beyond the "low hanging fruits" reductions that are available to us at limited cost. It would rather mean no more flights, no more cars, no more heating or warm water, no more screens, only local fertilizer-free food, and

---

<sup>7</sup> Even though it concerns the duty of beneficence, and not the duty not to harm others, this balance is obvious in Peter Singer's claim that we are excused for not preventing something bad to happen if it would mean sacrificing something of "comparable moral importance".

so on. Citizens of developed countries, and more generally affluent people across the globe, are currently so reliant on fossil fuels for a large part of their daily activities, that getting rid of their GHG emissions altogether would amount to radical lifestyle changes. To perform deep emission cuts would certainly be, for most people, a very demanding sacrifice. In the context of the current energy system, such a duty would seriously impair the people's capacity to make a decent living, without mentioning the impossibility to pursue all their other life projects. Nonetheless, in the face of the harm brought about by our lifetime emissions (assuming that Nolt's calculation is correct), it may seem that it is what morality demands of us.

Yet, many writers, including John Nolt himself, consider that the duty to reduce our carbon footprint is less demanding than that, and only applies to luxury (or unnecessary) emissions (see for example Vanderheiden 2008; Nolt 2013; Baatz 2014; Peeters et al. 2015). I share their intuition that our individual climate duties can only be so demanding, but this intuition does not fit with the fact that our lifetime emissions are responsible for the death of two persons.<sup>8</sup> When intuition and theory conflict, one has to decide which one to retain. In this case, I think that the intuition must be trusted and that there is a theoretical explanation as to why our individual climate duties are in fact less stringent than they appear according to the no-harm principle. The reason is that climate change is not a paradigm case of harm doing. It is a case of unstructured collective harm and must be assessed accordingly.<sup>9</sup> In the next section, I argue that contributing

---

<sup>8</sup> Climate change raises many difficult questions of responsibility and causation related to the role of individual emissions. Tackling all the aspects of this issue would overly complicate the picture and is beyond the scope of this paper. Here and henceforth, I use the phrase "being responsible" as a shorthand to express that certain consequences can be attributed to a given action, without delving further into causation theories.

<sup>9</sup> In the same vein, Fruh and Hedahl argue that considerations of demandingness are excluded from duties of justice, whereas they are allowed to play a role with duties of *systemic* justice (by which they mean something similar to unstructured collective harm) (2013).

to climate change is less wrong than causing harm directly, which explains why our climate duties are weaker than expected (which does not mean that they are insignificant or moderate).

#### 4 How wrong is it to contribute to climate change?

Challenges to the harm-avoidance perspective, as applied to individual carbon emissions, usually focus on the *causal inefficacy* problem. In a nutshell, they claim that individual emissions play no causal role because they *make no difference* to the harm brought about by climate change. In the relevant literature, one can find at least three different lines of argument explaining why they purportedly make no difference: (1) the same amount of GHG will be emitted anyway; (2) the existence of climatic thresholds and the fact that climate change is overdetermined; and (3) the fact that personal emissions are too small to be morally significant. I think that satisfactory responses have been given to all three challenges in the relevant literature (for a review, see Fragnière 2016). Therefore, I am going to assume, following Nolt, that personal emissions do make a morally significant difference, and will focus instead on how we should assess this difference.

The crux of the question is that causing harm alone and directly, and (inadvertently) taking part to a complex collective action problem like climate change is not exactly the same. Dale Jamieson defines paradigm moral problems as follows: “an individual acting intentionally harms another individual; both the individuals and the harm are identifiable; and the individuals and the harm are closely related in time and space” (2010, 436). It has been raised countless times that climate change is clearly not of that kind. The problem does not stem from one source, but from the accumulation of a great number of minute and uncoordinated contributions. Moreover, its

harmful consequences are not intentional, but unwanted side effects of carbon-emitting activities. For these reasons, climate change is an instance of what has been called *unstructured collective harm* (Kutz 2000).

In what follows I argue that, all other things being equal, contributing to unstructured collective harm is less wrong than causing the same amount of harm in the context of a paradigm case of harm doing. The starting point of this argument is that there are in fact two ways to determine the wrongness of contributing to collective harm. Indeed, when Nolt calculates that the average American will be responsible for one two-billionth of the total harm brought about by climate change over the next millennium, this can be interpreted in two different ways. First, the agent can be held responsible for his share of the overall harm (here, for one two-billionth of the expected four billion deaths, that is for two deaths). This method, followed by Nolt, regards the amount of harm attributed to the individual agent as *concentrated* on a few victims. Second, the agent can be held responsible for his share of every bit of harm (here, one two-billionth of each one of the four billion deaths). According to this interpretation, the amount of harm attributed to the individual agent is *spread* over all the victims. Let us call these two interpretations respectively *concentrated harm* and *spread harm*.<sup>10</sup>

Now, my argument proceeds in two steps. First, I argue that in the case of climate change we should assess the wrongness of individual contributions according to spread harm. Second, I argue that spread harm is less wrong than concentrated harm.

---

<sup>10</sup> A similar distinction can be found in the literature about the morality of collective harm (for example Parfit 1984; Jackson 1987) and has been mentioned in relation with climate change by Jason Kawall, in a short commentary piece (Kawall 2011). Even though Kawall does not delve further into this distinction, I am indebted to him for pointing out its importance.

In defence of the first proposition, let us first consider a fabricated case.

*Free lunch:* 100 hungry peasants are about to eat their lunch. Each bowl contains 100 beans.

Before they can start eating, 100 uncoordinated thieves come and take, each, one bean from each bowl. As a result, each thief eats 100 beans and the peasants are deprived of their lunch.<sup>11</sup>

This is a case of unstructured collective harm. In this case, each thief is responsible for depriving each peasant of one-hundredth of his lunch, because it is how things actually happened. Here, we know exactly who did what to whom. This corresponds to spread harm. Now, imagine a slightly different story where the thieves steal each one full bowl of beans to one different peasant. The overall outcome is the same (hundred peasants deprived of their lunch), but this time each offender is fully responsible for the starving of one peasant. This corresponds to concentrated harm. However, notice that this second scenario is not a case of unstructured collective harm anymore. It is a collection of paradigm cases of harm doing. So, it seems that spread harm is warranted for unstructured collective harm, whereas concentrated harm should only be used for collections of paradigm harm doing. It is so because what makes cases of unstructured collective harm what they are, is precisely the scattering of one's action over many victims, associated to the aggregation of many similarly scattered actions.

Now, back to climate change, John Nolt's claim that "the average American *causes* through his/her greenhouse gas emissions the serious suffering and/or deaths of two future people" (2011, 9 emphasis added) is misleading (morally speaking), because, by using concentrated harm, it assumes that climate change can be treated as a collection of paradigm cases of harm doing. But this cannot be correct given that climate change is a genuine case of unstructured collective

---

<sup>11</sup> This thought experiment is adapted from (Glover 1975). The analogy with climate change is imperfect, since stealing implies a strong intentionality that is absent in the case of GHG emissions. In what follows I set this difference aside.

harm. Indeed, once our personal emissions have been released into the atmosphere, the carbon dioxide molecules are scattered and mixed with a huge number of other molecules stemming from multifarious sources. This mix of tiny contributions makes the global temperature rise, which in turn brings about numerous and diverse instances of harm all over the planet. So, according to the very nature of the problem the correct way to describe the effect of the lifetime emissions of the average American is to say that they are responsible for one two-billionth of every bit of harm caused by climate change (spread harm). This might seem quibbling, but as we will see shortly it has real normative implications.

The need to use spread harm in order to assess the wrongness of emitting carbon dioxide is also reinforced by another element. For the sake of simplification, Nolt's calculation understandably involves only round numbers and only one metric of harm, namely casualties. This methodological choice presents advantages that I do not dispute (see Nolt 2014). What I would like to point out though, is that it tends to mask the diversity of harm that climate change brings about. Simply counting the number of casualties tends to conceal the fact that each case has its own history with its own amount and kind of suffering and harm. As a consequence of climate change, people will suffer or die at different ages with different levels of well-being, in very different (and maybe incommensurable) circumstances. Some people will suffer but not die, some others will be ruined, and so on. My point is that the harms brought about by climate change are so many and varied that the only way to attribute responsibility to GHG emitters, proportionally to their emissions, is to spread their share of responsibility across every bit of harm. Imagine a situation in which there is only four emitters (emitting equal amounts of GHG) and four victims. The first victim dies at 80 after a fulfilling life, the second one dies at 17 after having experienced a miserable childhood, the third one is pushed out of business and becomes

long-term unemployed, and the fourth one loses her parents very young but manages to live a decent life. All these harms are caused by climate change. The best way to distribute responsibility for these harms is surely not to attribute the plight of victim 1 to emitter 1, that of victim 2 to emitter 2, and so on. This would obviously be arbitrary. The only fair way to do that is to attribute to each emitter responsibility for one quarter of the harm suffered by each victim, according to spread harm.

I am turning now to the second part of the argument, namely that for a given amount of harm, the act that brings it about must be considered less wrong when the harm is spread than when it is concentrated. The central idea is that the seriousness of the harm imposed on one single victim, and therefore the wrongness of the act that brings it about, includes moral thresholds. For instance, there is traditionally a special moral weight attributed to the infliction of death and permanent disability. When such thresholds are crossed, the moral wrongness of the act causing the harm increases abruptly, in a more than proportional way. The most famous thresholds of this kind in ethical theories are human rights (Caney 2009a) and basic capabilities (Nussbaum 1997), but one can devise numerous other thresholds according to the amount of harm and suffering inflicted, the presence or not of lasting consequences, and other criteria. My point here is not about what exact thresholds we should use, but that morality, and in the present context the notion of harm, allows for threshold thinking. This is obviously the case with common-sense morality and deontic theories, but it might also be true of consequentialist ones.<sup>12</sup>

---

<sup>12</sup> One way to do that for utilitarianism would be to argue that very serious harms, for example of the irreversible kind, create disproportionate disutility. For instance, losing two eyes creates arguably more than twice the disutility of losing only one eye. In that respect, special weight should be granted to death, permanent disability and the like, in the utilitarian calculus.

Now, if we acknowledge that there are such moral thresholds, it follows that for a given amount of harm done there is more risk that an important threshold is crossed when harm is concentrated on one victim than when it is spread across a large number of persons. As a result, all other things being equal, causing trivial harm to a lot of people (without crossing any threshold) is less wrong than causing very serious harm to one person. This seems pretty intuitive in the case of Nolt's calculation. From an individual point of view, being responsible for the death of two persons seems indeed far worse than being responsible for one two-billionth of each death, which in this case amounts to shortening the life of each victim of 0.6 seconds.<sup>13</sup> I am confident that, if given the choice, almost everybody (even utilitarians) would prefer to impose a slight, almost imperceptible, annoyance on a lot of people than violating the most fundamental human rights of one person.<sup>14</sup>

Since we should assess the harm done by individual emissions according to spread harm, and that it is less wrong than when the same amount of harm is concentrated on a few victims, I conclude that, from the individual point of view, contributing to climate change is less wrong than causing the same amount of harm directly in the context of paradigm cases of harm doing. In other words, the moral fault associated to the lifetime emissions of the average American is less important than Nolt's calculation suggests.

---

<sup>13</sup> Nolt uses a figure of four billion people that will be harmed (suffer and/or die) over the next millennium. If we assume that on average each of these persons will lose 40 years of life (or 1'261'440'000 seconds), it follows that the lifetime emissions of the average American are responsible for the shortening of each future victim's life of 0.6 second (one two-billionth of 40 years of life).

<sup>14</sup> If utilitarians insist that they do not like the very idea of moral threshold, it might be possible to defend the same conclusion by postulating a negative version of decreasing marginal utility. This "increasing marginal disutility" rule claims that your personal well-being is affected in a more than proportional way (although incrementally), when the harm you are subjected to increases. I cannot investigate the plausibility of this idea here, but it seems to make sense at least in economic terms. Losing a few thousand dollars causes less disutility to a billionaire than to a working poor. Being ruined is far worse (disproportionately worse) than losing a few hundred dollars.

However, one important element of the problem is that this emitting behaviour is replicated by millions of other agents and that all these contributions add up to create great amount of harm. This reminds us that, in spite of all I have said in this section, high emitters are not totally off the hook. Contributing to climate change can be very serious matter. Everybody can reasonably be expected to know that other people are emitting GHG and that must be taken into account in our moral assessment. In that respect, we must grant to Nolt's calculation that it gives us a sense of the size of our contribution to this harmful process. It also allows to invalidate the idea that our emissions are morally insignificant (see Nolt 2014). Nevertheless, as I have argued, and contrary to appearances, this calculation does not establish that emitting during one's whole lifetime is as wrong as causing the death of two future persons. And for that matter, even though climate change will violate the basic rights of a lot of people, it would be incorrect to say that individual emissions do so.

## 5 Back to demandingness

If it is less wrong to contribute to climate change than to cause harm directly, all other things being equal, we can infer that the reason justifying an individual duty to refrain from emitting GHG is less strong than the reason justifying an individual duty to refrain from causing the death of two persons in paradigm cases. As we have seen in section 3, if these two reasons were equally strong this would lead to an extremely demanding duty to reduce one's carbon footprint. Conversely, if I am right that the reason for refraining from emitting is less strong than that, it means that it can be more easily outweighed by other considerations, such as the cost of compliance, in the moral calculus. In particular, it is plausible that it can be outweighed not only

by fundamental entitlements of the duty bearer, such as her basic rights or her basic capabilities, but also by less weighty moral reasons such as the aim to pursue important personal life projects.

To illustrate this, let us briefly consider Samuel Scheffler's agent-centred prerogative theory. Scheffler suggests that it is morally permissible for agents to value their own projects "out of proportion" to the other impersonal reasons for action (1982, 14). In other words, agents are allowed to give more weight to their interests than to the interests of other people. Scheffler calls this an *agent-centred prerogative*, because it is up to the agent to choose, *within certain limits*, whether she wants to give special weight to her interests or prefers to sacrifice them to the benefit of others. Of course, "within certain limits" is key here, and an important part of the question that I cannot fully examine, is to determine where the limits stand. Even though Scheffler does not discuss it at great length, he suggests some kind of weighted proportionality rule, where an agent is allowed to favour her own interests only if their moral importance, weighted by a certain proportionality factor  $P$ , exceeds the moral importance of the interests of others. Scheffler develops his theory as an amendment to consequentialism, but its rationale can plausibly be adapted to other ethical frameworks.

In the deontic context I am dealing with in this article, it would look as follows. An agent is allowed to favour his own interests only insofar as the moral reason for favouring them (i.e. the cost of compliance with the no-harm duty), weighted by a certain proportionality factor  $P$ , is stronger than the moral reason for refraining from harming others. However, owing to the moral importance traditionally given to the duty not to harm others unnecessarily, it is safe to assume that it would work the other way around, and that less weight would be given to the interests of the duty-bearer than to the interests of the victims. In other words, in the context of the no-harm

principle the proportionality factor  $P$  would likely stand between 0 and 1. For instance, an uncompromising version of the no-harm principle claiming that harm must be avoided no matter what it takes, would set the proportionality factor at 0. This means that costs to the agent have no weight at all in the moral calculus, which is, as already mentioned, implausible. Indeed, being required to sacrifice my life in order to prevent causing you some inconvenience would certainly be deemed way too demanding by many people. Another possible position would be to use a criterion similar to that used by Peter Singer for duties of beneficence, namely that agents cannot be required to sacrifice something of comparable moral importance. This would set  $P$  at 1, which is intuitively rather implausible as well when applied to negative duties. Indeed, most (non-utilitarian) people would probably deny, or at least strongly hesitate to say, that we are allowed to knowingly cause the death of an innocent to save our own life. As a result, the value of  $P$  in the context of the no-harm principle is plausibly somewhere between 0 and 1, which means that the interests of the agent *do have some moral weight*, but less than the interests of the victims.

If this is correct, it follows that the duty to avoid causing the death of two innocent persons in paradigm cases is very stringent. Possibly so stringent (with a  $P$  between 0 and 1) that virtually nothing could morally justify non-compliance in ordinary circumstances. On the other hand, as explained in the previous section, the picture is very different in cases of unstructured collective harm such as climate change. In such cases, individuals still have a *pro tanto* duty not to cause harm through their contribution to these harmful processes. However, because in such a case the moral wrong at stake is much smaller, the reasons for favouring the agent's own interests (even weakened by a  $P$  smaller than 1) are more likely to sometimes outweigh the reasons for refraining from emitting carbon dioxide. For instance, flying might be morally allowed if it is the

only way (that is there is no less carbon-intensive alternative) to pursue a career that is central to the agent's identity and most important life projects. In the face of it, this application of the no-harm principle to climate change does not seem to lead to overly demanding climate duties. In the next section, I briefly consider two objections that can be raised against this result.

## 6 Objections

### 6.1 *Too agent-centred*

A first possible objection is that my argument about spread harm being less wrong than concentrated harm is misguided because it is too agent-centred. It makes no difference to the victims, the objection goes, whether harm is spread or concentrated. The same number of people will die because of climate change in both cases. Consequently, claiming that emitting carbon dioxide is less wrong than harming people in paradigm cases, does not do justice to the victims.

My response is that an agent-centred perspective seems to be a sensible choice when it comes to assessing the demandingness of a duty and the weight of the agent's life projects in the moral calculus. A victim-centred approach would indeed be unable to take such agent-relative reasons into account. This being said, I acknowledge that, from a victim-centred point of view, my defence of limited individual climate duties might be found wanting, since it does not guarantee the outright prevention of harm, but only its mitigation to a certain extent. Indeed, insofar as my interpretation of the no-harm principle grants some moral weight to the agents' interests, individual duties will not suffice to solve the problem of climate change entirely, even if one assumes full compliance. However, this apparent conflict between agent-centred and victim-centred approaches is, I think, largely an illusion. The reason is that it does not necessarily follow from a victim-centred perspective that the problem must be solved solely at the individual

level. The “responsibility gap” that my account of individual climate duties seems to open can coherently be bridged by an account of collective duties supplementing the individual ones.<sup>15</sup>

Unlike some writers who dismiss outright the existence of an individual mitigation duty, and favour political action instead (Sinnott-Armstrong 2005), I think that duties at the individual and collective levels are complementary (see also Tan 2015).

As many writers have already stressed, institutions and opinion-makers have an important role to play in reshaping the carbon-intensive infrastructure, economy, and norms of current societies (Caney 2014). For instance, Elisabeth Cripps convincingly argues that acting directly at the collective level has several advantages, such as gains in effectiveness, efficiency and fairness (Cripps 2013; see also Fragnière 2016). Efficiency is of particular interest here, since action at the collective level (such as developing public transportation, promoting carbon-free energies, and the like) would lower the cost of complying with individual climate duties, and offer new avenues for citizens to adopt climate-friendly lifestyles without sacrificing important life projects. Yet, these transformations at collective level would be useless if the citizens do not collaborate or take advantage of them. For instance, energy-efficient building renovation is bound to remain ineffectual if end-users keep the windows open all winter and turn up the thermostat. Similarly, public transportation does not deliver the expected climate benefits if most people stick to their car. Consequently, climate duties must be distributed between the collective and individual levels. In this context, my account provides a simple and plausible rationale explaining why individuals do have some duty to reduce their carbon footprint, but also why everything cannot rely on individuals alone in the fight against climate change.

---

<sup>15</sup> I cannot provide such an account here, but several writers have argued in this direction (Neuteleers 2010; Cripps 2013; Tan 2015). For these authors, the existence of a collective duty translates into individual duties to promote collective action. It is plausible that under my account, this promoting duty would be at least as stringent as the individual duty to reduce carbon emissions.

## 6.2 *Too lenient*

Another possible objection is that my account of individual climate duties is too lenient. There is indeed indeterminacy involved in the assessment of (1) the moral importance of causing trivial harm to numerous people and (2) the weight that should be given to the agent's own interests. This indeterminacy, the argument goes, makes it possible to justify virtually any carbon dioxide emissions, on the ground that they serve the interests (even minor ones) of the agent.

To begin with, the goal of this article is not to develop a full-blown theory of individual climate duties. Its more modest aim is to explain, in a comparative way, why the duty to refrain from contributing to climate change is not as stringent as the duty not to harm people in paradigm cases. Also, the indeterminacy of my account does not necessarily entail that individual climate duties are weak. The actual stringency of individual duties will depend on our assessment of factors 1 and 2 above. Even though there is probably no way to determine their importance theoretically, the context suggests that climate duties are in fact fairly demanding.

First, being responsible for very slight harm imposed on billions of people has moral importance (although less than the same amount of harm concentrated on a few people), especially when numerous other people are doing the same. Hence, given the high stakes coming along with climate change, not only for human societies but also for nature, it seems clear that emitting carbon dioxide is not just something trivial and that there are good reasons for stopping doing so. Second, the weight that should be given to the agent's interests in the moral calculus is a matter of moral sensitivity, but since I argued that it should be smaller than 1, it is unlikely that frivolous and trivial interests would suffice to outweigh the reasons to reduce one's GHG emissions. Plausibly, only core interests – namely those that are central to one's integrity and

identity – will be able to do so (see also Fruh and Hedahl 2013). What exactly counts as core interests can unfortunately not be examined here.

Another upshot of this account is that the *pro tanto* duty to avoid emitting greenhouse gases can be outweighed by agent-relative reasons only if there is no alternative course of action achieving the same result with less carbon emissions. If there is such alternative, the agent-relative reasons lose all their moral weight in the calculus. For instance, if an agent has to choose between commuting by car or by train, she has to choose the less carbon-intensive option. Mere convenience cannot in itself be a reason for shirking her individual climate duty. Moreover, some degree of diligence and good faith can be expected from agents in their daily moral deliberations.

## 7 Conclusion

There is widespread intuition that an individual duty to reduce one's carbon emissions should not be overly demanding, and this article shows that this intuition is backed by theoretical reasons. Due to the nature of climate change as a moral problem, agent-relative reasons are likely to sometimes outweigh reasons for refraining from emitting carbon dioxide. However, this conclusion does not outright dismiss the application of the no-harm principle to individual GHG emissions. It only limits its scope, and grants individual agents a measure of moral freedom in the pursuit of their most important life projects.

## Acknowledgments

For their helpful comments on earlier versions of this article, I would like to thank Steve Gardiner, Lauren Hartzell Nichols, Alex Lenferna and the audience at two conferences in Seattle and Manchester. I also thank two anonymous reviewers for *Environmental Values* for helping me improve this version. I gratefully acknowledge financial support from the Swiss National Science Foundation (Grant P3P3P1\_161111).

## References

- Aufrecht, Monica. 2011. "Climate Change and Structural Emissions: Moral Obligations at the Individual Level." *International Journal of Applied Philosophy* 25 (2): 201–13.
- Baatz, Christian. 2014. "Climate Change and Individual Duties to Reduce GHG Emissions." *Ethics, Policy and Environment* 17 (1): 1–19.
- Bell, D. 2011. "Does Anthropogenic Climate Change Violate Human Rights?" *Critical Review of International Social and Political Philosophy* 14 (2): 99–124.
- Berkey, Brian. 2014. "Climate Change, Moral Intuitions, and Moral Demandingness." *Philosophy and Public Issues (New Series)* 4 (2): 157–89.
- Broome, John. 2012. *Climate Matters: Ethics in a Warming World*. New York: W. W. Norton & Company.
- Caney, Simon. 2009a. "Climate Change, Human Rights and Moral Thresholds." In *Human Rights and Climate Change*, edited by Stephen Humphreys, 69–90. New York: Cambridge University Press.
- . 2009b. "Human Rights, Responsibilities, and Climate Change." In *Global Basic Rights*, edited by Charles R Beitz and Robert E Goodin, 227–47. Oxford: Oxford University Press.
- . 2012. "Just Emissions." *Philosophy & Public Affairs* 40 (4): 255–300.
- . 2014. "Two Kinds of Climate Justice: Avoiding Harm and Sharing Burdens." *Journal of Political Philosophy* 22 (3): 1–38.
- Cripps, Elizabeth. 2013. *Climate Change and the Moral Agent: Individual Duties in an Interdependent World*. Oxford: Oxford University Press.
- Cuomo, Chris J. 2011. "Climate Change, Vulnerability, and Responsibility." *Hypatia* 26 (4): 690–714.

- Fragnière, Augustin. 2016. "Climate Change and Individual Duties." *Wiley Interdisciplinary Reviews: Climate Change* 7 (6): 798–814.
- Frierson, Patrick. 2014. "Kant, Individual Responsibility, and Climate Change." *Ethics, Policy and Environment* 17 (1): 35–38.
- Fruh, Kyle, and Marcus Hedahl. 2013. "Coping with Climate Change: What Justice Demands of Surfers, Mormons, and the Rest of Us." *Ethics, Policy and Environment* 16 (3): 273–96.
- Glover, Jonathan. 1975. "It Makes No Difference Whether or Not I Do It." *Proceedings of the Aristotelian Society, Supplementary Volumes* 49: 171–90.
- Hiller, Avram. 2011. "Morally Significant Effects of Ordinary Individual Actions." *Ethics, Policy and Environment* 14 (1): 19–21.
- Hourdequin, Marion. 2010. "Climate, Collective Action and Individual Ethical Obligations." *Environmental Values* 19 (4): 443–64.
- IPCC. 2014. *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Edited by Core Writing Team, R.K. Pachauri, and L.A. Meyer. Geneva, Switzerland: IPCC.
- Jackson, Frank. 1987. "Group Morality." In *Metaphysics and Morality: Essays in Honour of J.J.C Smart*, edited by Philip Pettit, Richard Sylvan, and Jean Norman, 91–110. Oxford: Blackwell.
- Jamieson, Dale. 2010. "Climate Change, Responsibility, and Justice." *Science and Engineering Ethics* 16 (3): 431–45.
- Johnson, Baylor L. 2003. "Ethical Obligations in a Tragedy of the Commons." *Environmental Values* 12 (3): 271–87.
- Kawall, Jason. 2011. "Future Harms and Current Offspring." *Ethics, Policy and Environment* 14 (1): 23–26.
- Kutz, Christopher. 2000. *Complicity: Ethics and Law for a Collective Age*. Cambridge ; New York: Cambridge University Press.
- Lichtenberg, Judith. 2010. "Negative Duties, Positive Duties, and the 'New Harms.'" *Ethics* 120 (3): 557–78.
- Maltais, Aaron. 2013. "Radically Non-Ideal Climate Politics and the Obligation to at Least Vote Green." *Environmental Values* 22 (5): 589–608.
- Meyer, Lukas H. 2003. "Past and Future: The Case for a Threshold Conception of Harm." In *Rights, Culture, and the Law*, edited by Lukas H Meyer, S L Paulson, and Thomas W Pogge, 143–159. Oxford University Press.
- Neuteleers, Stijn. 2010. "Institutions versus Lifestyle: Do Citizens Have Environmental Duties in Their Private Sphere?" *Environmental Politics* 19 (4): 501–517.
- Nolt, John. 2011. "How Harmful Are the Average American's Greenhouse Gas Emissions?" *Ethics, Policy and Environment* 14 (1): 3–10.

- . 2013. “The Individual’s Obligation to Relinquish Unnecessary Greenhouse-Gas-Emitting Devices.” *Philosophy and Public Issues (New Series)* 3 (1): 139–65.
- . 2014. “Casualties as a Moral Measure of Climate Change.” *Climatic Change*, April.
- Nussbaum, Martha C. 1997. “Capabilities and Human Rights.” *Fordham Law Review* 66 (2): 1–29.
- Parfit, Derek. 1984. *Reasons and Persons*. New York: Oxford University Press.
- Peeters, Wouter, Andries De Smet, Lisa Diependaele, and Sigrid Sterckx. 2015. *Climate Change and Individual Responsibility: Agency, Moral Disengagement and the Motivational Gap*. New York: Palgrave Macmillan.
- Rateman, Ty. 2012. “Bearing the Weight of the World: On the Extent of an Individual’s Environmental Responsibility.” *Environmental Values* 21 (4): 417–36.
- Rentmeester, Casey. 2014. “Do No Harm: A Cross-Disciplinary, Cross-Cultural Climate Ethics.” *De Ethica* 1 (2): 1–18.
- Sandberg, Joakim. 2011. “‘My Emissions Make No Difference’: Climate Change and the Argument from Inconsequentialism.” *Environmental Ethics* 33 (3): 229–48.
- Scheffler, Samuel. 1982. *The Rejection of Consequentialism*. New York: Oxford University Press.
- Schmidtz, David. 2000. “Islands in a Sea of Obligation: Limits of the Duty to Rescue.” *Law and Philosophy* 19 (6): 683–705.
- Shue, Henry. 2014. “Historical Responsibility, Harm Prohibition, and Preservation Requirement: Core Practical Convergence on Climate Change.” *Moral Philosophy and Politics*, 1–25.
- Singer, Peter. 1972. “Famine, Affluence, and Morality.” *Philosophy & Public Affairs*, 229–43.
- Sinnott-Armstrong, Walter. 2005. “It’s Not My Fault: Global Warming and Individual Moral Obligations.” In *Perspectives on Climate Change*, edited by Walter Sinnott-Armstrong and Richard B Howarth, 285–307. Oxford: Elsevier.
- Tan, Kok-Chor. 2015. “Individual Duties of Climate Justice under Non-Ideal Conditions.” In *Climate Change and Justice*, edited by Jeremy Moss, 129–47. Cambridge: Cambridge University Press.
- Vanderheiden, Steve. 2008. *Atmospheric Justice: A Political Theory of Climate Change*. New York: Oxford University Press.
- Williams, Bernard. 1973. “A Critique of Utilitarianism.” In *Utilitarianism: For and Against*, edited by J.J.C. Smart and Bernard Williams, 75–150. Cambridge: Cambridge University Press.