



# Justifying Subsistence Emissions: An Appeal to Causal Impotence

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## 1 Introduction

It is widely believed that we have a moral obligation to reduce our individual greenhouse gas emissions, in an effort to mitigate the harmful effects of climate change. In particular, we have (at the very least) a duty to individually refrain from the production of frivolous ‘luxury’ emissions—the standard example being that of joyriding in a gas-guzzling SUV. The reasoning usually given is simple: Our collective emissions are causing harm, and causing harm is *prima facie* morally wrong, so our individual emissions (which constitute the collective emissions) are morally objectionable on these same grounds. In short, joyriding is wrong because it causes harm. As John Broome puts it,

When you cause emissions, they harm other people. This is an injustice done to those people, and it also makes the world worse. So reducing emissions is a duty of justice and also a duty of goodness. (2012, 53)

Yet, at the same time, it is also generally assumed that the production of life-sustaining ‘subsistence’ emissions—e.g., by breathing or cooking one’s food—is morally *permissible*.<sup>1</sup> But, here is the catch: If joyriding causes harm by putting CO<sub>2</sub> into the atmosphere, then so too does breathing also cause harm by doing the same.<sup>2</sup> So, if

<sup>1</sup> For a discussion of the distinction between luxury and subsistence emissions, see: Shue (1993).

<sup>2</sup> For simplicity, in this paper I will use ‘breathing’ as a surrogate for all subsistence emissions. Note, however, that, while respiration does temporarily increase the atmospheric concentration of CO<sub>2</sub>, it typically does not actually increase the *total* amount of carbon *in the cycle*. For, when metabolizing biomass, one merely releases carbon that was already a part of that cycle. (I am assuming that none of my readers ever enjoy a lump of coal or a glass of oil at dinner.) By contrast, the burning of fossil fuels adds *new* carbon (or, rather, very very old, stored carbon) into the cycle—and this is what has been the real driving force of climate change. Even so, clearly the majority of our subsistence emissions *do* require the burning of fossil fuels—at least for many of us, they do—for instance, those emissions associated with growing, transporting, refrigerating, and cooking our food, or obtaining and treating our water, building and maintaining shelter, and clothing, heating our homes in the winter (in very cold climates), the receiving of life-sustaining health care (including the very act of *breathing* in some cases, such as those requiring the

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our individual emissions do in fact cause harm, and if we are to maintain that there is a moral difference between these two actions, then we must identify some feature of subsistence emissions which luxury emissions lack; namely, one which justifies the harming of others in the one instance, but not the other.

It is no surprise, then, that subsistence emissions (if they are even discussed at all) are generally likened to acts of self-defense. For instance, Stephen Gardiner writes, “a subsistence emission should, I propose, be understood as akin to an assertion of a right to self-defense.”<sup>3</sup> For, most agree that it is morally permissible to harm or even kill others in self-defense; i.e., as an act of defending one’s self against significant harm, or even death. The proposal is then to apply this same reasoning to subsistence. For, note: If we do not breathe, then we will die. So, by producing subsistence emissions, we are merely fending off death. For this reason, such emissions are permissible, even though they cause harm. (Or so the claim often goes.)

But, that’s not quite right. As I will argue in §2, the act of harming another by way of, e.g., breathing or cooking one’s food is neither structurally nor morally equivalent to an act of harming in self-defense. So, if our subsistence emissions cause harm, this harm is not justified on grounds of self-defense. In fact, as I will argue, if our subsistence emissions *do* harm others, then they are not justified at all. They are, rather, morally impermissible. This is clearly an undesirable result. I respond to some potential objections to these claims in §3. Afterward, having explored the possibility that our individual emissions cause harm, and having found this option to entail the unacceptable conclusion that our subsistence emissions are immoral, I then turn in §§4-5 to our other alternative: Namely, I explore the possibility that our individual emissions do *not* cause harm. The upshot of that option is much better than one might expect. For, I argue, there remains a plausible route to the moral condemnation of individual luxury emissions, even if they are harmless.<sup>4</sup> What is more,

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Footnote 2 (continued)

use of a ventilator powered by fossil fuels), and so on. Thus, the concerned reader may wish to understand my investigation into the permissibility of *breathing* as an investigation into the permissibility of *breathing with the use of a ventilator* (or any other life-sustaining, fossil-fuel-burning example of their choice).

<sup>3</sup> Gardiner (2017, 446). The first explicit defense of this claim comes from Martino Traxler, who writes, “Much like self-defense may excuse the commission of an injury and even a murder, so their necessity for our subsistence may excuse our indispensable current emissions and the resulting future infliction of harm they cause.” (2002, 107). Mark Budolfson agrees, writing, “it appears that ‘subsistence emissions’ can be justified on grounds of self-defense ...” (2014, 32) For further discussion, see also Vance (2017, 579n), and McLaughlin (2019, 267).

<sup>4</sup> As Julia Nefsky has pointed out in her excellent (2019) survey of the problem of causal inefficacy with respect to collective harms, there are two options here. Namely, one may argue that contributions to harmful collective actions are (i) wrong on the grounds that they cause harm, or (ii) wrong on some other (harmless) grounds. She calls these two strategies (i) “denying that it won’t make a difference” and (ii) “rejecting the implication” (that causal inefficacy entails moral permissibility), respectively. It is strategy (ii) that I will endorse here.

this account of the wrongness of luxury emissions avoids the undesirable result of entailing that our subsistence emissions are also impermissible. I conclude that the most promising route toward justifying subsistence emissions while simultaneously condemning luxury emissions requires that we embrace the claim that our individual emissions make no perceptible difference with respect to the harms associated with climate change.

## 2 Subsistence Emissions and Harming in Self-Defense

If our individual emissions harm others, it is easy to see why the production of subsistence emissions may *seem* morally equivalent to harming in self-defense. After all, both actions share this in common: If you refrain from acting, you will die (or, in less extreme cases, suffer significant harm).<sup>5</sup> But, this feature does not *automatically* justify the harming of others. To see why, compare the following cases:

**Knife Attack** An attacker is coming at you with a knife. The only way to stop them from killing you is to shoot them. You do so, obliterating the attacker's kidney, and escape.

**Kidney Harvest** You are terminally ill, and in need of a kidney transplant. Unfortunately, the only suitable donor is unwilling to part with their spare. So you, a trained surgeon, sneak into their room one night, and surgically remove one of their kidneys for yourself.

In each case, if you refrain from acting, you will die. In each case, a single individual uniquely stands in your way, and must be harmed in order for you to live. Yet, these factors *alone* do not justify harming them. For, your action in Kidney Harvest is clearly impermissible.

Now, one might suggest that the moral difference between the two cases has to do with the fact that, in Knife Attack, the person whom you must harm in order to live has purposely *chosen* to put you in that situation. Put differently: In Knife Attack, what makes it permissible to harm your attacker is their *malicious intent*. Unfortunately, if true, then this would undermine the position of my opponent, who (we are supposing) wishes to justify subsistence emissions on grounds of self-defense. For, surely the victims of climate change—i.e., those whom you would harm with your individual emissions—are guilty of no malintent toward you. Fortunately for my opponent though, the present suggestion misses the mark. For, intuitively, it is also permissible to defend one's self against someone who poses a threat but *lacks* malicious intent, as in the following famous case:

**Falling Man** You are trapped at the bottom of a well. A large man is, through no fault of his own, falling down the well directly toward you. If you do noth-

<sup>5</sup> Actually, this is not quite right—at least not with respect to any *particular* subsistence emission. For, unless you are already on the brink of death, there is no particular meal, or breath, etc., which is such that, if you do not take it, you will die. What *is* true, however, is that, if you do not perform *any* emissions-producing actions for, say, a *day*, then you will certainly die.

ing, your body will cushion his fall such that he will live and you will die. However, you happen to have a ray gun which could annihilate the falling man into oblivion. You aim and fire, disintegrating the falling man and saving your own life.<sup>6</sup>

Here, your “attacker” is innocent, and has imposed the choice of kill-or-be-killed upon you, through no fault of his own. In short, he lacks malicious intent. Yet, intuitively, it is still permissible to kill him.<sup>7</sup>

So, what justifies harming in self-defense? We might suggest that your actions in both Knife Attack and Falling Man are permissible because, in both cases, your harmful action is necessary in order to *eliminate a threat* to yourself, and that harming your victim is necessary in order to eliminate that threat. But, this answer is still not quite right. For, this could *also* be said of your action in Kidney Harvest. (Namely, in that case, it is necessary that you perform the surgery on your sleeping victim in order to eliminate the threat of death by kidney failure). Harming others is not rendered permissible just so long as it merely eliminates **a** threat to one’s self. Rather, the crucial element in both Knife Attack and Falling Man which renders those actions permissible is that the harmed individual *is* the threat, and harming them is necessary in order to eliminate this threat. Contrast this with Kidney Harvest, where the harmed individual poses no threat to you, but is rather *used as a mere means* to eliminating a threat.<sup>8</sup>

Returning to the case of subsistence emissions: Assuming that our individual emissions cause harm, the harms caused by our subsistence-actions clearly are *not* justified on grounds of self-defense. For, unlike the victims in self-defense cases such as Knife Attack and Falling Man, those whom we harm by breathing or cooking our food pose no threat to us.<sup>9</sup> In that respect, the harm caused by our subsistence emissions seems closer, morally, to what one does in Kidney Harvest.

Yet, one might object, the moral verdict for subsistence emissions is surely not as bad as it is in Kidney Harvest. For, in Kidney Harvest, one *uses* one’s victim as a mere *means* to one’s own survival—a feature which many believe to make an action especially objectionable. By contrast, this is a feature which the harm caused by the production of subsistence emissions *lacks*. In short, when subsisting, one does not opportunistically use the victims of their emissions as a mere means to their own survival.

I agree. For this reason, I propose instead that harming others via the production of subsistence emissions is morally analogous not to what one does in Kidney

<sup>6</sup> This case is adapted from Nozick (1974, 34). See also Thomson’s ‘Innocent Threat’ case (1991, 287).

<sup>7</sup> And it would be even clearer that firing the ray gun is permissible, should doing so *non-lethally* harm the falling man – e.g., by forcefully knocking him back to the top of the well, and merely obliterating his kidney in the process.

<sup>8</sup> See, e.g., Quinn’s (1989) distinction between what he calls ‘direct opportunistic agency’ and ‘direct eliminative agency’.

<sup>9</sup> There is an element of this claim that may be controversial. I will say more about this in the next section.

Harvest, but rather to what one does in the following sort of case (adapted from Foot, 1967).

**Toxic Cure** You are sealed in a room with an innocent person and find yourself suddenly terminally ill. To survive, you must immediately manufacture a cure, which will have the unfortunate side-effect of releasing a lethal gas which will kill your roommate.<sup>10</sup>

In Toxic Cure, manufacturing the cure is clearly impermissible. (In fact, it is worth noting that in Philippa Foot's original case she assumes it obvious that it would be morally wrong to manufacture a cure which releases fumes that kill one person, even if doing so saves *five* others from dying!) Yet, the production of subsistence emissions seems equivalent to the production of the cure in all of the morally relevant respects. Consider: In both cases, (i) if you do not act, then you will die; (ii) if you do act, then you will cause significant harm to others; (iii) the harm done to others is not done intentionally as a means to an end, but is rather a mere unintended, unfortunate (though foreseen) side-effect of your action; and (iv) your victims are innocent, and pose no threat to you. In such cases, when an action has these features, performing that action is morally impermissible.

In sum, here I have argued that, if our individual emissions do cause harm to others, then all emissions (including subsistence emissions) are *prima facie* morally wrong. As such, subsistence emissions are in need of some moral justification. Yet, as we have seen, any harm done to others by an act of subsisting does not constitute an act of harming in self-defense. So, subsistence emissions are not justified on these grounds. What is more, harming others via the act of subsisting seems morally analogous to the manufacture of the cure in Toxic Cure, which is all-things-considered morally impermissible. The unfortunate result is that, if our individual greenhouse gas emissions do cause harm, then even our subsistence emissions are morally impermissible.

### 3 Objections

In the preceding section, I argued for two conclusions: On the assumption that our subsistence emissions harm others, these harms (i) *are not* morally equivalent to harming in self-defense, and (ii) *are* morally equivalent to harming in Toxic Cure, which is morally impermissible. Now, as it turns out, I *do* think that subsistence emissions are morally permitted; and I believe this because I reject the claim that our individual emissions cause harm. What is more, I believe this while maintaining that luxury emissions are *not* morally permitted. This will be the topic of the next two sections. If you are already convinced that claims (i) and (ii) are true, you may

<sup>10</sup> For similar cases, see also Hanna's 'Lethal Gas' case (2012, 22), and Bowman's discussion of it (2014, 24). Hanna, Bowman, and Foot all assume, without controversy, that killing the innocent bystander is morally wrong in this instance.

proceed to that discussion now. However, in this section, I will first briefly respond to some potential objections to the two claims argued for thus far.

- (1) Carbon dioxide is not intrinsically harmful. To a certain extent, generating it is even a *good* thing. (Plants require it, for instance.) By contrast, in Toxic Cure your actions generate a poisonous toxin that is inherently harmful.

**Reply:** True. Though this difference seems irrelevant, morally. For instance, presumably we would still deem it wrong to manufacture the toxic cure if instead it caused your roommate to quickly ingest twenty liters of water and die from water poisoning. What matters is that, presently, we have *too much* of a good thing; and when we come to have *so much* of a good thing that it *begins to cause harm*, producing more of it *begins to be wrong*.

- (2) In the case of subsistence, your actions harm *yourself* as well as others (since your emissions contribute to climate change, which affects everyone, including yourself). Yet, in Toxic Cure, your actions only harm others.

**Reply:** First, even if it were true that your subsistence emissions harm yourself as well as others, this would not automatically render them permissible. For instance, poisoning the local water supply is still morally wrong, even if I am drinking from it too. But, more importantly, it is simply not true that you harm yourself by subsisting—even *granting* the claims that you worsen the negative effects of climate change with your emissions *and* that you yourself suffer some of those negative effects. For, assuming that subsisting results in a life worth living, your options are (a) produce subsistence emissions and enjoy a life worth living, or (b) do not produce them and die. Clearly, you do not make yourself worse off than you otherwise would have been by choosing (a). Thus, you do not harm yourself by choosing option (a).<sup>11</sup>

- (3) Contrary to what was said, those harmed by your subsistence emissions *do* pose a threat to you (due to the fact that they are emitting too). In this respect, producing such emissions is more like what one does in Falling Man, rather than what one does in Toxic Cure.<sup>12</sup>

**Reply:** First, recall that what justifies harming in self-defense is not only that the harmed individual *is a threat*, but also that *harming them is what neutralizes the threat that they pose*. But, subsistence emissions are not the means to neutralizing the threat of climate change (in the form of wildfires, droughts, floods, hurricanes, etc.). Rather, they are the means to neutralizing the threats of asphyxiation, starvation, exposure, and so on. In fact, the production of subsistence emissions actually *increases* the likelihood that you will be harmed by the climate change resulting from the emissions of others, since subsisting ensures that you will be alive that much longer (and thus increases your likelihood of being harmed by a climate-change-caused flood or wildfire, etc.). Second, the

<sup>11</sup> Note that, in the absence of consensus about how best to understand the concept of harm (see, e.g., Bradley, 2012), I am using here the standard counterfactual comparative account.

<sup>12</sup> This is Budolfson's approach (2014, 32), along with suggestion (8), below.

- accusation above ignores the fact that *most* of the individuals who will be harmed by your emissions have not yet been born—and, as such, are *not* a threat to you.
- (4) Still, in the case of subsistence emissions (and unlike Toxic Cure), *everyone else* is doing the harmful action too. That makes it permissible.

**Reply:** The assumption here seems to be that a harmful action (one which is clearly immoral when performed alone) becomes permissible once everyone starts doing it. This seems clearly false—even in situations where you yourself are a victim of these harmful acts. (I am assuming here that ‘tit for tat’ behavior is morally unacceptable.) For example, if all of your neighbors punched everyone on your block in the face, including you, this would not render it permissible for you to *also* punch everyone on your block in the face.<sup>13</sup>

- (5) Yet, by choosing to release harmful emissions in the presence of others, we are all *implying* by our actions that we *consent* to everyone else doing the same; and it is morally permissible to harm someone if they have consented to it. By contrast, in Toxic Cure, you have *not* obtained your victim’s consent.

**Reply:** First, I am not convinced that it is always permissible to harm others even with their consent. For instance, it does not seem plausible that it would be permissible to kill just anyone who asked me to do so. Second, the implication here is that, if I act in ways that harm others while benefitting myself, I implicitly consent to others doing the same. This is implausible. Finally, it is generally agreed that an action can only imply consent in cases where one has a reasonable alternative to that action.<sup>14</sup> But, the only alternative to producing subsistence emissions is death. As such, producing them cannot imply consent to being harmed by others.

- (6) Nevertheless, as Henry Shue argues, we have a basic “right to subsistence”. (1996, 23)

**Reply:** First, the context under which Shue argued for this right, as well as his application of it, were very different than the present context or suggested application. For starters, Shue was primarily concerned with policies at the societal level, rather than actions at the individual level. Within that context, his aim was two-fold: (a) to ground a positive duty to structure society in such a way that it protects and provides for basic human needs; i.e., a duty to install “some level of social organization to protect the minimal cleanliness of air and water and to oversee the adequate production, or import, and the proper distribution of minimal food, clothing, shelter, and elementary health care.” (ibid., 25); and (b) regarding global justice, to support the conclusion that the burden of mitigating climate change ought to fall upon affluent nations, rather than those nations which are at near-subsistence levels (Shue, 1993).

But, let us imagine that there is a similar right at the *individual* level. My reply: Even if we have such a right, it would not follow that we are morally permitted to exercise it in circumstances where doing so causes *harm*. Our basic rights are generally understood to be limited whenever exercising them significantly harms

<sup>13</sup> Perhaps those with retributivist inclinations will disagree here. But, it seems to me quite mistaken to suggest that what justifies, say, *breathing* is that each breath taken is an act of retribution!

<sup>14</sup> See for instance, Huemer (2013, 25).

others. For instance, my right to liberty does not include the liberty to punch you in the nose. (Nor does a right to religious freedom entail the permissibility of ritual human sacrifice; nor the right to free speech entail the permissibility of speech that incites violence; and so on.) Furthermore, if our individual right to subsistence *did* give us license to cause significant harm to others in order to ensure our own survival, then it would follow that one's action in Toxic Cure is also permissible—which is clearly not the case.

- (7) The actions taken in Toxic Cure (and Kidney Harvest) are only impermissible because the harm done to others is so severe. But, subsistence emissions cause far less harm. It is permissible to cause just a *little* harm to others in order to avoid *significant* harm to one's self.

**Reply:** That is simply not true. For instance, John Nolt estimates that “the average American causes through his/her greenhouse gas emissions the serious suffering and/or deaths of two future people.”<sup>15</sup> Using that estimate, the average citizen of the island nations of Tuvalu and Kiribati are responsible for the loss of about 9.2 years and 5.6 years of life, respectively.<sup>16</sup> I have selected these two nations specifically because they are regularly held up as paradigm instances of nations whose citizens are being harmed by climate change without having wrongfully contributed to the problem. For, these are island nations living at near-subsistence, which are predicted to be uninhabitable within decades due to rising sea levels.<sup>17</sup> Now, it seems to me that it would still be morally wrong to manufacture a toxic cure for one's self which took 5-10 years of someone's life from them (killing a 75-year-old person, for example). Yet, if our emissions cause harm, then this is exactly what the people of Tuvalu and Kiribati do. In that case, their actions are still morally wrong.

- (8) Still, even if the *total* harm adds up to some morally significant amount, in reality the harm is dispersed, spread out over everyone on Earth. If we removed only two-hundredths of a second of life from every person alive, this would add up to five years of life taken—roughly the amount attributed above to the average citizen of Kiribati. Yet, it seems permissible to cause insignificant harms to large numbers of people in the act of preventing significant harms to one's self or others.<sup>18</sup> Furthermore, Nolt's estimates have a wide margin of error. It is possible that our emissions cause far less harm than his calculation states.

<sup>15</sup> (2011, 9) This is reaffirmed in Nolt (2013, 118). Interestingly, this figure does *not* include the emissions that we produce by breathing—which, Nolt says, account for about 3-4% of global human emissions. He offers no reason for this exclusion other than that, “for obvious moral reasons” he does not think “these gases should count.” (2011, 4-5)

<sup>16</sup> Numbers used: In 2019 (the most recent data available), the average global life expectancy was 72.6, so two lives equal 145.2 years; the average American emitted 16.06 metrics tons of CO<sub>2</sub> per year; the average Tuvaluan, 1.02 tons; and the average Kiribatian, 0.62 tons. Source: Our World in Data (<https://ourworldindata.org/grapher/co-emissions-per-capita>)

<sup>17</sup> See, e.g., Risse (2009), Broome (2012, 49-50), and Buxton, (2019), just to name a few.

<sup>18</sup> Consider, for instance, Scanlon's famous case (1998, 235) of interrupting the broadcast of the World Cup, upsetting millions of sports fans for fifteen minutes, in order to prevent significant pain and damage to one person. Many have the intuition that this would be morally permissible. In the context of subsistence emissions, Budolfson points out that, while it would not be permissible for an agent to *kill* someone else in order to save herself, nevertheless, it would be permissible for her to “[scratch] the finger of each person on the planet” in order to do so. (2014, 32)



**Reply:** First, note that, by this method of calculation, and using Nolt's estimates, even the average *American's* emissions would remove less than six-tenths of a second of life from each person alive (nearly 8 billion individuals)—or rather less than that, given that the harm is really spread out over both present *and* future people. So, this move runs the risk of proving too much, undercutting my opponent's moral reasons against even *luxury* emissions. (Keep in mind, I am still assuming that my opponent wishes to condemn them on the grounds that they cause harm.) But second, and more importantly, note that this objection essentially *embraces causal impotence*. For, whether our individual emissions cause *no* harm, as I believe, or else cause so little harm as to be unnoticeable—either way, it seems that our individual emissions make no *perceptible* difference. But, then, my critic and I are now in agreement. For, I *also* believe that our individual emissions make no perceptible difference; and it is this claim that we ought to endorse if we want to justify our subsistence emissions.

In conclusion, I maintain that, if our individual subsistence emissions cause significant, perceptible harms, then they are not morally justified—no more than the manufacture of the cure in *Toxic Cure*. Now, perhaps a more satisfying moral defense of the harm done by subsistence emissions is forthcoming. But, at the very least, I hope to have shown here that, *if* we accept that our individual emissions *do* in fact cause harm, then justifying subsistence emissions is no straightforward task.

#### 4 On Individual Causal Impotence

So, where does this leave us? One option is to simply bite the bullet and resign ourselves to the conclusion that *all* emissions are impermissible. For instance, Catriona McKinnon writes,

The effects of subsistence emissions on the availability of the scarce resource of the planet's atmospheric capacity to absorb any emissions makes all token acts of emission impermissible. The fact that every person on the planet has, at base level, a choice between emitting greenhouse gases to survive and death does not mean that emitting greenhouse gases must be morally permissible: emitting greenhouse gases for whatever purpose creates risks of serious climate change harm for future generations, and so is wrong. The current generation is, in this sense, facing a moral tragedy: we cannot be expected to choose our own deaths, but in avoiding death we must do wrong. (2012, 100)

Rather than resigning ourselves to the wrongness of subsistence, however, I will now argue that we ought instead to resign ourselves to the causal inefficacy of our individual emissions.

Now, either our individual emissions cause harm, or they do not. Some believe, as John Broome does, that we have “no reason to doubt that every bit of emission that you do cause is harmful.” (2012, 77) But, what if that is mistaken? For, there

is, I think, a compelling argument to the contrary.<sup>19</sup> It goes as follows: The problem of climate change is so massive, it is said, that our emissions are merely ‘a drop in the bucket’, so to speak—or more aptly, a drop in a *flood*. Imagine a destructive flood averaging one meter deep, and covering an area over 40 times larger than Vatican City. As the flood is washing away homes and taking lives, you, using an eyedropper, add a single drop of water to that flood. How much additional harm do you think this would cause? The most plausible answer is: *None*.

But, in terms of quantities, this is precisely analogous to putting one joyride’s worth of CO<sub>2</sub> into the atmosphere.<sup>20</sup> In other words, while an act of joyriding clearly adds some non-zero amount of *greenhouse gases* into the atmosphere, it makes no difference at all to the *amount of harm* that results from climate change. The result is a collective action problem, where, though our individual actions make a perceptible difference along *some* dimension (e.g., the amount of CO<sub>2</sub> in the atmosphere), they do not make a perceptible difference along any dimension that is *morally significant* (e.g., harm). Therefore, we have no moral obligation to reduce our individual greenhouse gas emissions after all.

That is how the causal impotence argument generally goes. To further illustrate its central claim, perhaps it will be helpful to consider the following case (adapted from Parfit 1984, 80):

**Harmless Torturers** An innocent person is hooked up to a device, which shocks them with increasing amounts of electric current as a dial is turned. Turning the dial once increases the amount of current delivered to its victim by such a small amount that its effects are imperceptible. (Turning it 1,000 times, however, results in severe pain.) You are one of 1,000 torturers, each of whom turns the dial only once. The result is that the victim suffers severe pain.

Clearly, the torturers *collectively* cause significant harm. But, what is the causal impact of any particular individual’s contribution? The answer cannot be that each turn of the dial causes some very small amount of harm. For, as the case is described, turning the dial only once causes *no perceptible difference*.<sup>21</sup> We might

<sup>19</sup> The most famous instance of this argument is found in Walter Sinnott-Armstrong’s 2005. See also his 2018 follow-up (with Ewan Kingston).

<sup>20</sup> These numbers represent the use of one gallon of fuel, and are derived from Vance (2017, 563n), plus the size of the Vatican City (0.44 km<sup>2</sup>).

<sup>21</sup> One might propose that there can be imperceptible increases in the amount of pain that one is experiencing, but this seem to me an oxymoron. As Kagan notes, “Indeed, it isn’t even clear that it makes any sense to say that pain has been increased imperceptibly.” (116) Nevertheless, perhaps it is still the case that one can be *harm*ed imperceptibly, as Derek Parfit believes. (1984, 79) I find this more general claim implausible too. (Though I do believe that one can be *wronged* imperceptibly—for example, by a Peeping Tom whom the victim never finds out about.)

It is worth noting that Parfit qualifies his position as follows, writing, “Some people disagree. Even if we believe that there can be imperceptible harms and benefits, it may thus be better to appeal to what groups together do. This appeal is less controversial.” (ibid., 82) He mentions this alternative again in a later unpublished work, writing, of an environmental collective action problem which he calls ‘Harmless Polluters’, “since the effect [of my pollution] on each will be ... imperceptible, it may be hard to think of my act as seriously wrong. ... It may help to remind myself that I am a member of a group who together do great harm.” (1988, 28-29) Indeed, this alternative strategy is exactly the one that I champion in §5.

instead claim that there are thresholds<sup>22</sup>; e.g., perhaps the victim notices no change from zero to one, or two, or three, or four—but *does* perceive an increase in pain when the dial is turned a *fifth* time). But, again, this is *not* how the case is described. To clarify, let us stipulate that, in Harmless Torturers, for *any* two adjacent dial settings,  $n$  and  $n+1$ , the difference in the amount of current administered is so small that there is *no perceivable difference* to the victim. If there were determinate thresholds, however, there *would* sometimes be a perceivable difference—namely, at every threshold.<sup>23</sup>

So, how much harm *does* each individual turn of the dial cause? Admittedly, given the case as described, the only possible answer is quite odd: *None*. In Harmless Torturers, no single torturer causes any harm whatsoever. What is more, there is *no fact of the matter* about when the victim experiences an increase in pain. Rather, it is *indeterminate*. Julia Nefsky describes such cases in the following way:

What is distinctive about nontriggering cases is that no single act serves as a trigger. So, the structure is not that of a tipping point: there is no precise point at which a limit is hit and the next act triggers a change in morally relevant outcome. Instead, the boundaries between one morally relevant outcome and another are vague, and so the difference between  $n-1$  and  $n$  acts of the relevant type can never, no matter what  $n$  is, make the difference between one morally relevant outcome and another. (2011, 377-378)

Applying this observation about the causal structure of certain collective action cases to SUV joyrides, Kingston and Sinnott-Armstrong write, “a plucked hair makes no difference to a person’s baldness. The same approach should be taken with regard to joyguzzles.” (2018, 180) They conclude that the harm resulting from climate change must be an *emergent* phenomenon, writing:

In our view, climate change is emergent in this way. Just as individual molecules of oil do not cause parts of sensations of sliminess (or yellowish color), so individual molecules of greenhouse gas do not cause parts of dangerous climate impacts. Instead, as with the sliminess and color of oil, what increases the dangerous impacts of climate change is larger groups of molecules of greenhouse gases. (2018, 175)

The above constitutes, I think, a compelling argument for the conclusion that no single individual’s greenhouse gas emissions cause any harm. But, perhaps the reader is still unwilling to accept this pessimistic picture of individual causal impact, on the grounds that it is too “metaphysically odd”.<sup>24</sup> After all, the suggestion here *does* seem to be that zero plus zero plus zero plus... adds up to some very large

<sup>22</sup> Also called ‘triggers’ (e.g., Kagan, 2011); small-scale versions of ‘tipping points’ (see, e.g., Broome, 2012, 34). (I should also note that, strictly speaking, the previous suggestion is a thresholds scenario too—namely, one taken to its limit, such that *every* increase in the number of dial turns triggers an increase in the amount of pain.)

<sup>23</sup> Note that *some* instances of collective action *do* clearly have a thresholds structure. For instance, take voting: Most of our votes make no difference. But, there *is* some particular number of votes,  $n$ , such that one additional vote ( $n+1$ ) will “tip the scales” in favor of the other candidate.

<sup>24</sup> See Hiller (2011, 349).

number—and that is absurd! But, I should like to point out that, even if some of our individual emissions *do* cause harm, there is independent reason to believe that they nevertheless *never make any perceptible difference*. The argument for *that* conclusion comes from Mark Budolfson, who writes:

greenhouse gas levels are currently accumulating, and will continue accumulating into the foreseeable future. To see why this is a problem for the argument, imagine that this week, as you engage in some emissions-generating activity, your emissions cause a catastrophic tipping point to be crossed. Nonetheless, even if you had avoided those emissions and thus hadn't tipped the scales yourself, it is certain that someone else's emissions would have tipped the scales at essentially the same time, because an entire planet of other people would still have been emitting at the same time even if you had not been emitting. This shows that, given the empirical facts, there is no chance that you could delay a catastrophic tipping point from being crossed today or in the foreseeable future by reducing your emissions, and thus there is no good reason for reducing emissions that arises from the possibility of tipping points being crossed now or in the foreseeable future. (ms, 36)<sup>25</sup>

Essentially, there is an overdetermination problem here, such that, even if some of our individual emissions *do* cause harm—whether in a linear way where *every* emission makes some small difference, or in a way involving thresholds, such that only *some* emissions make a (larger) difference—it would still turn out that no one's individual emissions make any *perceptible difference*. For, at best, our emissions only bring about the harms that they cause a mere fraction of a second sooner than they otherwise would have occurred, had we refrained from emitting them.

There are, of course, counter-arguments against the conclusion that our individual emissions make no perceptible difference.<sup>26</sup> I do not have the space to fully explore the issue here. The purpose of this brief survey has been, rather, to merely highlight the initial plausibility of that conclusion.<sup>27</sup> My ultimate aim is to demonstrate that we have *independent* reasons to endorse it; namely, embracing our individual causal impotence opens up a plausible route toward achieving the desired moral verdicts regarding subsistence and luxury emissions. So, let us turn to that topic now.

## 5 How to Embrace Causal Impotence and Still Achieve the Desired Moral Verdicts

Let us begin by considering the following case (from Sinnott-Armstrong 2005, 289):

<sup>25</sup> Kingston and Sinnott-Armstrong voice a similar concern, writing, “given that we’re constantly over-emitting—your refraining from joyguzzling only causes the threshold to be reached a fraction of a second later than it would have, had you joyguzzled. But, that’s not morally significant.” (2018, 177)

<sup>26</sup> See, for instance, Broome (2019).

<sup>27</sup> To explore the defense of this position in more detail, see those articles cited above—Sinnott-Armstrong (2005), Kingston and Sinnott-Armstrong (2018), and Budolfson (ms)—as well as Cripps (2013, 119-124) and Sandberg (2011).

**Car Push** Four people are pushing a car off of a cliff with an innocent person trapped inside of it. It takes the strength of three people to push the car. You decide to help them push. The car goes over the cliff, and the person inside of it dies.

Here, it is clearly wrong to help the others to push the car. But, notice: Your individual contribution *makes no difference*. That is, with or without your contribution, the exact same amount of harm occurs either way. So, right away, we can see that it *is* at least sometimes morally wrong to contribute to a harmful collective action, even when one's contribution makes no difference to the amount of harm that occurs (i.e., when one's contribution is causally impotent with respect to the harm).

We might think that this opens up a route to morally condemning the production of luxury emissions. That is, we might wonder whether joyriding in a gas-guzzling SUV is morally wrong for the same reason that pushing the car in Car Push is wrong. Sinnott-Armstrong puts this suspicion to rest, however, by pointing out that pushing the car is morally wrong because you clearly *intend the harm*—a feature which is absent in the case of joyriding in an SUV. But, elsewhere (2017) I have argued that a causally impotent contribution to a collective harm can be morally wrong even when there is *not* malicious intent. For instance, consider the following variant of the case above:

**Car Push (Light Exercise)** Four people are pushing a car off of a cliff with an innocent person trapped inside of it. It takes the strength of three people to push the car. They truthfully claim to be pushing the car only for the purpose of getting some light exercise—though foreseeing, of course, that together they will collectively cause the death of one person as a side-effect of their efforts. You are a bystander who happens to be jogging by just then. Correctly seeing that your individual contribution will make no difference to the amount of harm done, you help to push the car, also merely for the purpose of getting some light exercise. The car goes over the cliff, the one inside of it dies, and the rest of you are all a bit more fit.

Once again, no single individual's contribution makes any difference to the amount of harm that occurs. But now it is also stipulated that none of the individuals pushing the car intends any harm. Rather, the harm that occurs is merely an unintended (though foreseen) *side-effect* of the group's collective action. Yet, clearly it is still morally impermissible to push the car in this case. In my earlier work, on the basis of this sort of case, I argued at length for the conclusion that it is *prima facie* morally wrong to contribute to a harmful collective action, even when that contribution makes no difference, and even when one intends no harm, but only *foresees* that harm will result from the group's action. My conclusion was a modified version of what Sinnott-Armstrong called 'The Group Principle' (2005, 298), which roughly states:

**The Group Principle:** It is *prima facie* morally wrong to perform an action if this action makes us a member of a group whose actions together cause harm.

Specifically, I argued for the conclusion that, *even if* your action makes no difference to the amount of harm that occurs, and *even if* you do not intend any harm, it is nevertheless prima facie morally wrong to perform an action which:

- (a) makes you a member of a harmful collective activity, where
- (b) the harm caused by the collective activity is severe, and
- (c) you foresee that the collective activity will cause severe harm, and
- (d) refraining from the action is not very costly (i.e., you will not be significantly harmed by refraining).

This conclusion entailed that your contribution in Car Push (Light Exercise) is morally wrong. But, more importantly, it also entailed that the production of *luxury emissions* is morally wrong—even if our individual emissions cause no harm.<sup>28,29,30</sup>

<sup>28</sup> The following worry for my proposal may have occurred to the reader at this point: What if I do not foresee that the collective action toward which I am contributing will cause harm – e.g., because I am a climate change denier? Are the luxury emissions of climate skeptics morally permissible for this reason? I address this worry for my proposal at length in my previous work (2017). But here I should simply like to reiterate that I am in agreement with Avram Hiller when he writes, “even if some individuals are ignorant of the expected effects of their actions, individuals ought not be ignorant” (2011, 353). For, I believe that there is at least some minimal duty to become informed about the effects of one’s actions, or the collective actions to which one is contributing. Climate skeptics act wrongly because they have failed in this respect.

<sup>29</sup> Here is another potential worry: What if joyriding in SUV’s is very important to me, and I would experience great sadness without it? In short, what if sacrificing my luxury emissions *is* very costly? Are they permissible in this case?

This objection reminds me of a criticism of John Arthur’s, which Peter Singer responds to in the context of his argument that we ought to give up our luxury goods and donate to famine relief (1972, postscript). (To be honest, it also reminds me a little of a spoiled teenager who, phone privileges having just been revoked, insists loudly, “You’re ruining my life!”) In response to Singer’s weaker moral principle – *If we can prevent something very bad from happening without sacrificing anything of moral significance, then we ought to do so* – one might object in the following way: “I could save a drowning child at the expense of ruining my very expensive pants, but losing these pants would be morally significant to me. So, I have no duty to save the child.”

In reply, Singer expresses that he had hoped to rely on the reader’s intuitive notion that luxury goods are of no moral significance, without offering a fully-developed theory of moral significance. Here, I have hoped for the same, with respect to luxury emissions. I should also like to point out though, as Singer does, that at the very least, my principle uncontroversially rules out the luxury emissions of those who, *by their own admission*, readily accept that the goods obtained via their emissions are of no moral significance.

What is more, it seems to me that there also exists some minimal duty to cultivate in one’s self the sorts of desires and goals that provide happiness or fulfillment *without* being “eco-gluttonous” – i.e., without producing excessive greenhouse gases or other environmental pollution. If there is such a duty – and I believe there is, though I do not have the space to argue for it here – then we might reply to the individual who has developed a deep and significant attachment to SUV joyriding that they really ought to wean themselves away from such a desire and cultivate instead some desires and interests that contribute less significantly to harmful collective actions.

<sup>30</sup> Finally, while I have already responded to Sinnott-Armstrong’s criticisms of this ‘Group Principle’ in my earlier work, here I should like to add a response to Parfit’s concern for such a principle, expressed as follows: “How can it make a moral difference whether [someone] produces bad effects jointly with other agents, or with Nature?” (1984, 82) It is true that my proposal does not entail that it is morally wrong to contribute to a *natural* disaster in a causally impotent way. Yet, I find this outcome acceptable. For instance, it seems to me permissible to add an eye-dropper of water to a destructive natural flood

I believe that this is significant, and I stand behind that earlier work. Here, I should like to add a further observation, regarding subsistence emissions. Let us begin by considering the following case:

**Car Push (Anti-Venom)** Four people are pushing a car off of a cliff with an innocent person trapped inside of it. It takes the strength of three people to push the car. You are a bystander who has just been bitten by a poisonous rattlesnake. There is some anti-venom under the car, which will save your life. However, if you approach the car without helping to push it, you know with certainty that the others will forcibly prevent you from reaching the anti-venom, and you will die. So, correctly seeing that your contribution will make no difference to the amount of harm done, you help to push the car. As the car and its passenger hurtle downward toward their destruction, you reach the now-accessible anti-venom in time to save yourself.

I suspect that you will agree with me when I say that it now seems morally *permissible* to help push the car in this case, even if it was not permissible in either of the two previous cases. What has changed? In all three cases—Car Push, Light Exercise, and Anti-Venom—you are contributing to a very harmful collective action in a way that makes no difference. In the original Car Push case, there is malicious intent, while in both the Foreseeing and Anti-Venom variants, there is not. But—and here I think is the unique thing about Anti-Venom, the morally relevant difference which justifies your action in Anti-Venom, but not those other two cases—unlike *either* of the other two cases, in Anti-Venom the cost of not pushing the car is very high. Namely, *not pushing will cost you your life*. In short, the act of pushing the car fails to meet criterion (d) from the proposal above. For this reason, I believe, your contribution in Anti-Venom is morally permissible.

But, then, this entails something about the moral status of our subsistence emissions. For, they are just like one's contribution in Anti-Venom in all of the morally relevant respects. Namely, in both cases, one performs an action (pushing the car, or breathing) which makes no perceptible difference to the amount of harm that occurs, but nevertheless contributes to a collective action which *does* cause severe harm—and yet, refraining from pushing would be quite costly. For, inaction will cost you your life. For this reason, I conclude, individual subsistence emissions are morally permissible.

A clarification is in order. I am *not* arguing that it is permissible to harm others *whenever* refraining from doing so would be quite costly. If *that* were my conclusion, then this would entail that it is permissible to manufacture the Toxic Cure, or perform the Kidney Harvest. Yet, I do not believe that either of these actions are

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Footnote 30 (continued)

(provided that one does so without intending harm), but impermissible to add an eye-dropper of water to a destructive flood which is caused by billions of others who are doing the same (even when none of the contributors intend any harm). To those who disagree, I would only point out that I have not offered a *necessary* condition for the wrongness of contributing to a large-scale harm in a causally impotent way, but only a *sufficient* condition.

permissible. Fortunately, my proposal does not entail that they are. For, note that each of those two actions actually *makes a difference*. If you act, then someone dies in the one case, and loses a kidney in the other. But, if you refrain from acting, no harm will occur. In short, your actions in Toxic Cure and Kidney Harvest actually *cause harm*. Meanwhile, in Anti-Venom, your action merely *contributes to a collective harm in a way that makes no difference*. Though both kinds of action are, I believe, prima facie morally wrong, the latter, I contend, is much more easily justified than the former. This is why the costliness of refraining from action justifies the latter kind of action (i.e., causally impotent contributions to collective harms) but not the former (i.e., actually *causing* harm).

It is easy to see why the appeal to self-defense in order to justify subsistence emissions (discussed in §2) seemed so attractive, initially. For, ultimately, I have argued that it *is* the fact that refraining from producing subsistence emissions costs you your life which justifies these emissions, morally. But, the self-defense justification of subsistence emissions had this one flaw: The production of subsistence emissions is not an instance of harming in self-defense! Fortunately, as we have seen, since the production of subsistence emissions is not an instance of harming in the first place, it does not require such a robust moral justification. In the case of subsistence emissions, the fact that refraining from emitting them will cost you your life is more than enough to override any prima facie wrongness that attaches to your (causally impotent) contribution to a collective harm.

In summary, in previous work I have argued that it is morally *wrong* to contribute to a group action which is collectively causing significant harm—even if *one's individual contribution makes no perceptible difference*—provided that refraining from action would not result in significant harm to one's self. For this reason, it is wrong to help to push the car in Light Exercise, as is joyriding in a gas-guzzling SUV. Here, I have argued that such an action (namely, a causally impotent contribution to a collective harm) is *not* morally wrong whenever refraining from the action would result in significant harm to one's self. For this reason, helping to push the car in Anti-Venom is morally permissible, as is the production of subsistence emissions. In short, once we embrace our individual causal impotence, we retain a plausible route to the conclusions that (a) subsistence emissions are morally permissible, while (b) luxury emissions are not.<sup>31</sup> Indeed, given how difficult it seems to be to justify

<sup>31</sup> Here, I have focused solely on the two extremes: Absolutely vital activities such as breathing, and entirely frivolous activities such as joyriding. But, what of actions that fall somewhere in between, such as driving ten miles to work each day? I will not pretend to accomplish the difficult task of locating the line between luxury and subsistence here—indeed, I suspect that the boundary is vague, and that there ultimately *is no* such line. Nevertheless, I will gesture at a reply. We might assess the moral status of such actions in one of two ways:

(1) First, we might attempt to justify such actions on the grounds that, like breathing, foregoing them *also* entails sacrificing something of great moral significance. As I have previously noted (2017, 579n), following a suggestion from Batz (2014),

Plausibly, in carbon-dependent societies, emissions resulting from activities such as driving to work, using electricity for cooking, heating, lighting and so on might count as “subsistence emissions” in some extended sense ... [because] it would be considerably costly to forego such emissions [in any society that] is structured in such a way that reasonable alternatives are not readily available. In short, it is plausible that, in addition to subsistence emissions, certain emissions falling somewhere in between luxury and subsistence might *also* be all-things-considered permissible.



subsistence emissions, morally, if they *do* cause harm (as we saw in §2), this may in fact be the *only* plausible route toward their justification.

## 6 Conclusion

Either our individual emissions cause harm, or they do not. Here, I have argued that, if our individual greenhouse gas emissions *do* cause harm, then this appears to entail not only that our luxury emissions are impermissible, but that our subsistence emissions are too. However, if our individual emissions do *not* cause harm, there remains a plausible route toward the moral condemnation of our individual *luxury* emissions. What is more, endorsement of this route does *not* commit us to the impermissibility of our individual *subsistence* emissions. In short, only by conceding that our individual emissions make no perceptible difference may we coherently condemn luxury emissions while maintaining that subsistence emissions are morally permissible. So, I suggest that we happily do so.

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Footnote 31 (continued)

(2) Alternatively, we might simply bite the bullet and admit that *any* emission beyond the level of mere subsistence is morally impermissible. In turn, for this reason, perhaps we have a duty to nullify them via carbon offsetting. This is, for instance, Broome's position in chapter 5 of his (2012). I should note that my preference is for the first option.

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