Public Reason 8 (1-2): 3-13

Climate Change-The Hardest Moral Challenge?

Ingmar Persson
University of Gothenburg & Oxford Uehiro Centre for Practical Ethics

Abstract: This paper explores why it is so hard for us to do what we morally ought to do to mitigate anthropogenic climate change by reducing our carbon dioxide, CO_2, emissions. It distinguishes between two sources of this difficulty: (i) factors which make us underrate the harm that we *individually* cause when we perform our everyday CO_2 emitting acts and, thus, the wrongness of these acts, and (ii) factors which make it difficult for us to *cooperate* to the extent necessary to mitigate effectively harmful climate change by reducing our everyday CO_2 emitting acts. Under (i) are listed such factors as the temporal remoteness of climate harm, the fact that the causal connections between our acts and this harm are elusive, that countless agents together cause harm which is diffused widely over countless, anonymous victims, by acts routinely done. As regards (ii), a comparison with the problems of cooperation in the well-known tragedy of the commons is natural, but it is here argued that the problem of reducing our CO_2 emissions is disanalogous in several respects which make it harder: the world's nations differ enormously in respect of level of welfare, their record of past emissions, and the degree of exposure to climate harm; additionally, it is harder to survey compliance and apply sanctions to those who defect from agreements, in particular as future generations who have not consented to these agreements are involved. Together these factors make up a good case for saying that the problem of ameliorating anthropogenic climate change by reduction of our CO_2 emissions is the hardest moral problem humanity is facing.

Key words: climate change, CO_2 emissions, cooperation, the commons.

Tony Leiserowitz, of the Yale Project on Climate Change Communication, has said of the problem of counteracting anthropogenic climate change: "You almost couldn't design a problem that is a worse fit with our underlying psychology", and Daniel Gilbert, professor of psychology at Harvard, joins in: "A psychologist could barely dream up a better scenario for paralysis" (Marshall 2014, 91). In this paper, I will try detail factors that buttress the pessimistic diagnosis that the problem of mitigating anthropogenic climate is the hardest moral problem that humanity faces at present.[1] I don't mean that it's hard to come to a reasonable agreement about what we morally ought to do, as it can be when we have to make trade-offs between different kinds of value which is the case when, for instance, one act produces more well-being overall, but another distributes a smaller amount of well-being more justly, or one act harms people less, but involves using some of them as means. In such cases, it can be impossible in practice to reach agreement about what is the right act. No, I have in mind situations in which we can reasonably agree about what we ought to do-in the case at hand, broadly speaking, such things as significantly reducing our emissions of carbon dioxide, CO_2-but it's hard to get *a sufficient number of us to act on* what we agree that we ought to do. The fact that a moral problem is the hardest in

1] Most, if not all, of these factors are also discussed in Ingmar Persson and Julian Savulescu. 2012. *Unfit for the Future: The Need for Moral Enhancement*, Oxford: Oxford University Press. There is also a discussion of similar factors at much greater length by Stephen Gardiner. 2011. *The Perfect Moral Storm*, Oxford: Oxford University Press.

this sense doesn't mean that it's the *most serious* moral problem that humanity is up against, although it is reasonable to take it that moral problems that are candidates for being the hardest moral problems must be serious moral problems. I think that, for instance, the problem of preventing that the birth-rate in Africa will be so high that its population will increase from 1.1 billion today to 4.1 billion in 2100, unless there is an accelerating infant mortality, is likely to be a more serious problem in the sense that it will cause more human suffering and more damage to the astounding African wildlife in the present century.

We can distinguish between two sources of the difficulty of alleviating harmful climate change by cutting back on our CO_2 emissions[2]: (i) factors which make us underrate the harm that we *individually* cause when we perform our everyday CO_2 emitting acts, such as driving our cars or flying and, thus, the wrongness of these acts, and (ii) factors which make it difficult for us to *cooperate* to the extent necessary to prevent the climate harm that we cause by our daily CO_2 emitting acts by cutting down on these acts. It goes without saying that the factors listed under (i) are bound to reappear under (ii), since if it's hard for us to feel that some of our acts are wrong, we aren't much motivated to cooperate to reduce their number. Therefore, I'll start with an inventory of the factors (i).

As a point of departure, consider a situation in which it's *flagrant*, or more or less as obvious as it can be, what harm an agent causes and, thus, what reason there is to think an act is wrong if there is nothing to justify the harm: I punch you hard in the face, without having any good reason for doing so, such as your posing a serious threat to me. What are the factors that make this such a flagrant case of causing harm and, thus, of acting wrongly that most of us are shocked if we witness it, and wouldn't dream of executing the act ourselves? By sorting out these factors, I believe we could get a grip on what characterizes the acts whose harmfulness and, consequently, wrongfulness are more elusive and, so, more prone to be overlooked or underestimated, namely the ones that exemplify factors that are at the opposite end or maximally distant from the first factors. So, what are the factors that contribute to making the harmfulness and wrongfulness of our acts flagrant or evident?[3]

(1) *Temporal proximity between the act and the harm*: the pain and damage to the victim's face occur immediately after the punch. This enables us automatically to associate the harm with the punch. If it instead takes a long time for the harm to occur after an act is done, such an association won't be set up automatically, and we'll feel less uncomfortable about performing the harm-causing act. For instance, if we were forced to kill someone with a poison, we would tempted to give the victim a poison which took a very long time to kill rather than one which kills instantaneously.

2] There are other ways of alleviating harmful climate change, e.g. preventing deforestation, but I'm here focussing on the reduction of CO_2 emissions.

3] I'll assume that the victims of harm are humans. Arguably, there are factors that make us tend to underrate the harm done to non-human animals relative to humans, but these won't be discussed here.

This can be explained in part by the fact that *we are biased towards the near future*: we are more concerned about good and bad events that occur in the near future than in the more distant future. That's why we're relieved when an unpleasant event is postponed, and disappointed when a pleasant event is. This relief or disappointment is out of proportion to a reduction of probability that the postponement usually brings along. To the extent that there is this lack of proportion, there is reason to think that this temporal bias is irrational.

Now the harm caused by our CO_2 emissions is temporally very remote. CO_2 can accumulate in the atmosphere for hundreds of years, blocking radiation of heat from the Earth's surface, but letting through sunlight, thereby eventually leading to a harmful increase of the global temperature. But this is a very slow-working process which may take centuries to produce its worst effects.

(2) *The victim(s) is (are) identifiable and concrete*, that is, identifiable not in the sense that the names of the victims are known to the agents, but known in the sense that the agents are able to point them out and see what they look like. It's a familiar fact that we feel most sympathy or compassion with individuals who suffer before our very eyes. This is much harder for us to bear than suffering that is merely verbally recounted to us, even if it be the suffering of many more individuals. There is a correlation between this factor and temporal proximity: if the harmful effect of an act we perform is temporally proximate to the act, its victim is often within eyesight of us, whereas if the harmful effect is temporally distant, this is often not the case. When the harm is temporally very remote as in the case of climate change, the victims harmed will normally be anonymous, that is, we won't be able to pick them out.

(3) *Concentration of causation of harm to a single agent*: the agent who is dealing the harmful punch is just me, no other agent is involved. Contrast this with situations in which there is a diffusion or division of the causing of harm over several agents. Such a plurality of agents may either act simultaneously-like oarsmen rowing a boat-or some might act subsequently to others, as when one agent sets fire to the victim's house and another locks the doors to prevent people to escape from it. Common sense conceives moral responsibility *as being heavily based on causation*, so when causation of harm is spread over several agents, the feeling is that each agent involved is morally responsible for less harm. Indeed, even if you disperse the causation of harm over several of *your own* acts rather than concentrate it to a single act of yours-e.g. destroy a lawn by crossing it daily over the period of a year rather than by one act-you'll feel less responsible for the harm you cause. Yet on reflection it seems absurd that we could evade responsibility by such a dispersal of causation, as will become clearer when we consider the next factor.

(4) *Concentration of harmful effects to a single victim* rather than diffusion of the same quantity of harm over several victims, with the result that each suffers merely a fraction of the harm caused by the agent. Derek Parfit's 'harmless torturers' illustrate such a diffusion of harm caused (1984, § 29): instead of causing a single victim excruciating pain by increasing a painful stimulus a thousand times, each torturer in a group of 1000 torturers increases this stimulus by one unit for a thousand victims, thereby causing only

an *imperceptible* difference for each of the victims. Such a diffusion makes each torturer feel that he's acting less wrongly than he would be had he increased the stimulation a thousand times for one victim, even though the 1000 torturers together cause as much harm as they would do had they each increased the painful stimulus a thousand times for a single victim.

The reason for this apparent reduction of wrongfulness and guilt is that, while we are capable of feeling adequate sympathy or compassion for a single victim, we aren't capable of feeling adequate sympathy or compassion for several victims in proportion to their number. So, the fact that each victim is feeling less suffering diminishes our sympathy for each of them, but the fact that their number increases doesn't augment it, or at least not by far stretch in proportion. Yet, if there are several agents acting in concert, diffusion of effects doesn't exclude that the total upshot is the same as it would be if each agent had individually caused serious harm, e.g. if each of the thousand torturers had increased the painful stimulation a thousand times for a single victim.

However, large-scale diffusion of both agency and effect is precisely what happens with respect to climate change: the innumerable CO_2 emitting acts of each of us have only an imperceptible effect on the climate, but because there is such a huge number of us the total effect is harmful to a lot of the global environment, as harmful as it could be if each of us had noticeably destroyed a certain minor part of the environment. For instance, your driving your car won't make any measurable difference to the global temperature, so, you may feel that you may drive your car without being guilty of any harm. Yet, if the world's 700-800 million cars are driven by drivers who feel the same, great harm will eventually be done to the global climate.

(5) *Perspicuity of the causal process*: the causal connection between a punch in the face and pain and facial injury is so perspicuous that even a young child can understand it (though a scientific account of it may be a complicated matter). Needless to say, how CO_2 emissions cause harmful climate changes is a much more complicated matter. It takes so much of science to understand how they cause global warming that this has only been understood rather recently, and most of humanity still lacks this understanding. Moreover, a more precise knowledge of what temperature increases it takes to cause certain harmful effects, such as a certain amount of progressive melting of the vast ice caps on Greenland and Antarctica and a consequent rise of sea levels is something that even expert climate scientists disagree about. When there is some unclarity about how an act causes harm, some doubt might seep in about whether it really does. Also, uncertainty invites wishful thinking to the effect that perhaps we won't cause any climatic harm even if we don't change our extravagant life-style. People in the fossil fuel industry will not be late to exploit these sentiments, and they have the economic means to exercise a strong influence on the mass media and politicians.

(6) *The harmful act is an act out of the ordinary*: it isn't an act that we perform regularly or routinely. Most of us don't go around punching people in the face regularly, and those of us who do probably don't feel bad about it! By contrast, many of us have driven our

cars daily for years and years, and got accustomed to the idea that there isn't anything wrong about that. The fact that we and others around us have got into the habit of doing something routinely and regarding it as permissible makes it hard for us to take to heart an intellectual realization that these acts involve so much harm that they are in fact wrong, and as a result abstain from them.

This intransigence is shown also, for instance, by the fact that many people who become convinced that meat-eating is wrong find it hard to quit because they've got so used to eating meat and regarding it as permissible, and most people around them do the same. Habit and conformism make us blind to the wrongness of status quo.

Along these dimensions, then, our CO_2 emitting acts are at the opposite end to acts like punches in the face: their harmfulness is discreet or unobtrusive rather than flagrant or evident and, thus, we're spontaneously inclined to ignore or underrate their harmfulness and, so, their wrongness. It's plausible to hypothesize that evolution has programmed us to adopt moral aversion towards such flagrantly harmful acts as punching people in the face because they are actions that have been elements of our behavioural repertoire throughout our history, and their consequences have been invariably the same. But the causation of harm by CO_2 emitting acts is a recent addition to this repertoire, since they presuppose advanced technology and a huge number of agents performing them together. Consequently, it isn't surprising that we have a hard time convincing us that they could be harmful to an extent that could make them wrong.

On reflection, however, it seems clear that all of the six factors are irrelevant to the harmfulness of an action. The only exception is the non-perspicuity or elusiveness of a causal link when this factor makes it rational to doubt that there *is* such a link, and this is no longer true with respect to the causal link between our CO_2 emissions and harmful climate change. Nevertheless, all six factors contribute to making us spontaneously inclined to disregard the harmfulness of our CO_2 emissions. Therefore, if these acts benefit us, even slightly-which they certainly do-we'll be reluctant to abstain from them.

Let's now turn to the second source of difficulties (ii). To prevent the harm that we are causing by our CO_2 emitting acts, it isn't enough that *some* of us abstain from these acts, we need a majority of us to agree to do so in order to ensure effectiveness. This is due to the diffusion of agency and effect over several agents and victims, that is, factors (3) and (4). It goes without saying that the six factors that make us individually disinclined to cut down on our CO_2 emitting behaviour also make it difficult to animate a sufficient number of us to cooperate effectively to cut down on this behaviour, but cooperation introduces additional complications, which I'll now explore.

There is a well-known cooperation problem called *the tragedy of the commons*. It's natural to take it as a point of departure for a discussion of the problem of cooperation to mitigate anthropogenic climate change by reducing our CO_2 emissions. The tragedy of the commons consists of the herdsmen of a village trying to agree on restrictions on the grazing of their cattle in order to avoid overgrazing of the commons, and subsequent starvation for the herdsmen and their families. There's a problem of establishing cooperation here since,

although each of the herders has a self-interested reason to cut down on the grazing of their own cattle as a means to preventing overgrazing-which will ultimately inflict starvation on them and their families-they're likely to have a stronger self-interested reason not to do so. They might hope that a sufficient number of the other herdsmen reduce the grazing of their cattle, and free-ride on this reduction without making any reduction themselves. This strategy has the additional advantage that in the event that others by and large decide not cut down, they haven't made any useless sacrifice of their own welfare. But, obviously, if all or most of them reason and behave in this way, the collective grazing won't be reduced sufficiently to avoid overgrazing and eventual starvation, which is bad for all of them. There are however significant disanalogies between this situation and the problem of reducing global CO_2 emissions which make the latter a more pernicious cooperation problem. I'll now survey these disanalogies.

(A) *Cooperation to reduce effectively CO_2 needs to be more or less world-wide, involving at least bigger nations which are significantly different from each other.* A global agreement is clearly harder to establish than an agreement in a village in which everyone knows everyone, and share the same ethnicity and culture. This sharing is something that facilitates the growth of some measure of altruistic concern and trust among the herders. By contrast, there are deep ethnic, cultural, and political differences between many of the biggest countries of the world, countries like the USA, China, India and Russia. Some of them also have long histories of war and conflict. As a result, there will be minimal fellow-feeling between them, and trust that any costly agreements will be kept.

These differences make it difficult for some nations to cooperate *in general*, but there are also differences between the world's nations which are relevant for cooperation about the reduction of CO_2 emissions specifically. Let's review these differences.

(B) *The immense differences between the world's nations as regards their level of welfare, or GDP, and their level of CO_2 emissions per capita*. In the tragedy of the commons, the herdsmen might be thought to be roughly equally well-off, have a roughly equal number of cattle whose grazing needs to be reduced, and have equally many dependents to feed. This makes it comparatively easy for them to agree on what's required of each and everyone: they should divide equally among themselves the cut-downs of the grazing necessary to attain sustainability. The enormous differences in welfare between the world's richest and poorest nations rule out such a simple solution with respect to combatting climate change. These welfare differences make it reasonable to demand that richer nations pay more for measures to reduce the future level of CO_2 in the atmosphere because of their greater ability to pay, and this is likely to generate disagreement about how much more they should pay, and in what ways they should make extra contributions. This is something that has surfaced in international negotiations.

A related problem is that the per capita rates of emissions of the big emission countries differ greatly, and this may be so even though the total amount of emissions by the countries may be more equal because the size of their populations differs. To illustrate, consider the two countries that emit most CO_2 in the world, China and the USA; they

must surely be included in any effective cooperation. The population of China is around four times as large as the population of the US, but the per capita emission of the US is almost three times higher than they are in China. It would of course be disastrous for the climate if China were to increase its per capita emissions to the present level of the US. But it would be exceedingly difficult to get the US to accept a Draconic cut to bring them down to the current level of China's per capita emissions. So, a compromise in between which is satisfactory to both parties must be found. Clearly, it will be hard to find such a compromise which effectively reduces the global emissions of CO_2. Generally speaking, the problem is that developing countries are liable to aspire to the same standard of living as the more developed countries, a standard which the latter will be reluctant to lower markedly.

(C) *The historic record of CO_2 emissions differs between the more and the less developed nations*. Again, this can be illustrated by a comparison between China and USA: since 1850 USA has emitted roughly three times as much of the CO_2 put by human activity in the atmosphere as China. It's arguable that this estimate is largely irrelevant to current negotiations because a lot of the emissions occurred before there was any reason to suspect that they were harmful; therefore, it might be contended, there's no *moral* responsibility for the harm they've caused. But this is likely to disputed because, as noted, our commonsensical conception of responsibility bases it heavily on causation. This causal conception of responsibility might motivate the Chinese to propose that, on the basis of their more modest historical record, they have a right to a per capita rate of emissions in the future that is somewhat higher than that of the US. Personally, I don't believe that this causally based conception of moral responsibility is defensible, but it's so firmly moored in commonsensical thinking that it'll be persuasive to many. This is a complicating factor that's missing in the tragedy of the commons, since whatever the conception of responsibility, the herdsmen will be equally responsible for the overgrazing on the assumption that their cattle stocks are roughly equal.

(D) *The degree to which different countries of the world are harmfully affected by anthropogenic climate change varies widely*. Some countries are likely to sustain devastating damages, while other countries may stand to gain rather than lose by expected climate changes. Great losers are low-lying countries like Bangladesh, the Netherlands, and South Sea Islands-which run a serious risk of being inundated by rising sea levels-and regions in Sahel, Australia and the south-west of USA which will probably be exposed to severe droughts and desertification. Geographic regions which may enjoy salutary effects are Greenland, Russia and Northern Europe, though some of them might get massive waves of climate refugees from other parts of the world, e.g. Africa and the Middle-East, at their doorstep. Obviously, the losers have much more of an incentive to implement a reduction of emissions of CO_2 than the winners. The latter are asked to make substantial sacrifices of welfare largely for the benefit of other nations, and this is clearly less motivating due to the narrow limits of human altruism, which is largely confined to near and dear, like families and friends. Again, this is a feature that is missing in the tragedy of the commons in which

the herdsmen are asked to make sacrifices for the good of a collective to which they and their families belong.

Further, it should be noticed that even in countries which are expected to be comparatively severely hit by global warming, the worst effect won't be suffered by the *present* generation, who is making decisions about climate policies, or perhaps even their children, but by generations further into the future. This is because climate change is such a slow process. Thus, even these decision-makers are asked to make sacrifices for people who are to a great extent beyond the range of their limited or parochial altruism. By contrast, even the herdsmen *themselves* could be assumed to suffer from a failure to cut down on grazing. The tragedy of the commons-like *the prisoners' dilemma*-is commonly understood to show how *self-interested* agents could end up doing something that doesn't issue in the best outcome for themselves because they aren't willing to make any sacrifices for the common good. Now, due to the bias towards the near we're relatively unconcerned about effects in the more remote future even when they affect ourselves-that is why, for instance, smokers find it difficult to quit their hazardous habit. Obviously, we're even less concerned about temporally remote effects if they affect others, especially if they aren't near and dear to us, which they won't be if those affected are unknown people in the distant future or in distant countries. In those cases, the bias towards the near future and our parochial altruism join forces.

Additionally, making sacrifices of our own welfare, or the welfare of near and dear ones, for the sake of the global climate involves, as remarked, the further discouragement that the contribution we individually can make for the common good of all beings on the planet by reducing our own emissions is imperceptible or negligible because it takes a countless number of emissions like ours to produce a harmful climate effect.

(E) *Controls of compliance are lacking with respect to global treaties to reduce CO_2 emissions.* It's unlikely that there will be an effective surveillance of whether countries over decades comply fully with treaties to reduce their CO_2 emissions they have entered into. And if they are found out to have defected, there will probably be no effective sanctions to apply. Such checks and sanctions are surely necessary for there to be a reasonable guarantee of compliance, since we can't expect people all over the world to have much altruistic concern for and trust in each other, for reasons recounted above-see (A) in particular. Accordingly, these considerations have caused worry at international meetings. By contrast, in the tragedy of the commons the group of herders is so small that they can be expected know each other personally, having lived together for a considerable time. Thus, they can realistically be thought to have developed some altruistic concern for and trust in each other. Also, remember that the good of the herders themselves and their families is part of the common good, though by reducing the grazing of their cattle, the herders forgo the very best outcome for themselves-the prevention of overgrazing without making any sacrifices-and risk the worst outcome: making sacrifices while so many of the other herders don't, so that there's still overgrazing. But the risk of free-riding or defection is diminished by the fact that the group of herders is so small that they can realistically

be imagined to be able to keep an eye on each other. Since they can also realistically be thought to be joined together by bonds of fellow-feeling, they are likely to be motivated to collaborate to punish defectors and free-riders.

(F) *The effectiveness of current compliance to international agreements to reduce CO_2 emissions relies on the compliance of future agents who aren't bound by the agreements.* Cooperation about reducing CO_2 emissions has to extend far into future in order to be effective in alleviating global warming. But future generations who haven't consented to agreements about CO_2 reductions could in virtue of this fact claim that they aren't bound by them. Thus, there is a risk that when future generations realize that their standard of living is going down because of the reductions of CO_2 emissions implemented by earlier generations-reductions which may benefit primarily even later generations-they will be prone to discontinue these reductions. This is especially so, since they may fear that even if they keep them up, the following generation won't because they will be subjected to even greater hardships, and they have still greater reason to fear that the generations succeeding them won't keep in line because they'll be subjected to yet greater hardships, and so on. Such a chain of growing incentives to defect seems fatal to the possibility of reaching viable agreements.

To sum up, not only are nations at present encouraged to 'pass the bill' to future generations because these can't 'retaliate'; they are also encouraged to do so because they can't trust that future generations even of their own nations, let alone other nations, stick to necessary cut-backs agreed on. If it's hard to trust that the governments of other nations will at present stick to agreements, it's much harder to trust that their future governments will continue to do so.

Let's take stock. I've reviewed six dimensions, (1)-(6), along which our CO_2 emitting acts are at the opposite pole to acts whose harmfulness is so flagrant or evident that it's hard to deny their wrongness in the absence of justifying factors. This means not only that we'll be spontaneously disinclined to abstain from these emissions; it also means that we're unlikely to give our votes in general elections to political parties that favour reductions of CO_2 emissions. The factors (A)-(F) boost the unlikelihood of citizens voting for such 'green' parties. The result will be that liberal democracies are unlikely to have governments that give priority to efforts to mitigate global warming by cutting down on their CO_2 emissions. The parties that gain and retain power in liberal democracies are more likely to give priority to issues of employment, education, health care, restrictions on immigration, etc which directly benefit their voters. Politicians risk very little by omissions to combat climate change, since it's most unlikely that there will be any climatic catastrophe that can be definitely put down to human emissions as long as these politicians are in office, or even alive. The realism of these speculations is borne out by the fact that no sufficiently effective action against climate change has hitherto been taken, even though the problem has been on the agenda of organizations like the United Nations for more than twenty years.

Contrast with the risk for terrorist attacks. A major terrorist attack in a Western democracy might have seemed improbable before 9/11, but after it was no longer

be difficult for politicians to sell anti-terrorist policies to their voters because their harmfulness is flagrant and has been demonstrated. It's also in the politicians' interest to propose such policies, since terrorist attacks could happen while they are in office, and this would have a devastating effect on their chances of being re-elected. Furthermore, in the case of terrorism the majority of the voters aren't disinclined to accept policies which come down hard on the culprits because in this case *they* aren't the culprits as they are in the case of anthropogenic climate change. The problem in the case of terrorism is rather that, since it's as a rule easier to harm than to benefit, and the possibility of creating great harm grows with an increasing availability of more powerful technology, there will be innumerable loopholes through which great harm could creep in. It's hard to close them all without unduly curtailing the freedom of ordinary citizens. But citizens in general are probably more readily moved to approve of such measures than restrictions on their CO_2 emissions which will lower their welfare because terrorist attacks are acts whose harmfulness is flagrant like punches in the face, not the discreet kind of harmfulness that slowly and imperceptibly sneaks in on them under the cover of everyday life.

Moreover, it's in the interest of some economically very resourceful players who profit from the use of fossil fuel-in particular oil companies-to block policies to place obstacles in its path. As remarked, the causal connections between CO_2 emissions and harmful climate changes are elusive. True, there is an impressive body of scientific evidence demonstrating the influence of these emissions on the climate, but more precise knowledge about what impact various levels of CO_2 will have on the global climate and human civilization is missing. This provides agents interested in downplaying the risk of anthropogenic climate harm, like representatives for the fossil fuel industry, with room to exaggerate our lack of knowledge about the climatic impact of our CO_2 emissions. And they have the economic means to influence politicians and the media. The fact that the anthropogenic change of the climate is such a slow process and that it is masked by natural climatic variations makes us prone to overlook or dismiss it. As we have seen, evolution has wired us up to be alarmed by harm which occurs flagrantly, as is the case with punches in the face. When its occurrence is discreet or unobtrusive as in the case of anthropogenic climate change, wishful thinking has time to enter and distort the facts so that we can continue to benefit from our usual CO_2 emitting acts without any feelings of guilt.

All in all, the circumstances listed under (i) and (ii) conspire to make the moral problem of effective cooperation to mitigate harmful climate change by reduction of our CO_2 emissions maximally difficult. Its difficulty stems both from factors which make it hard for us to feel that our individual CO_2 emitting acts, which in fact contribute to climate change, are harmful, and from the fact that effective reduction of the harm they produce necessitates such an extensive cooperation of agents so different from each other. The combination of these features is what makes me think that this is the practically hardest moral problem humankind faces. The practically hardest moral problem must involve cooperation-of a kind that is hardest to establish. And it must be hard on the individual level to convince yourself that you act wrongly. The problem of achieving a requisite

reduction of CO_2 emissions scores high along both of these variables. This isn't to say that it's a problem that it is impossible to solve, but the odds are bad because the difficulties are rooted both in our psychology and in general facts about the state of the world.

Suppose that someone, say at the time of the Kyoto Protocol in 1997, had accurately predicted how things would develop up to this day with respect to measures to reduce CO_2 emissions. Then I think that at the time this prediction would have been described as pessimistic: after all, it would predict that CO_2 emissions would continue to increase quite steeply. But it would be moderately rather than extremely pessimistic, since it wouldn't have predicted any climatic *catastrophe*. Accordingly, I believe it's reasonable to be moderately pessimistic about the course of anthropogenic climate change during the next twenty years or so because it must be judged probable that we'll continue to act in the future as we've done in the past, unless some significant change of attitude occurs. But it's hard to see what could bring about such a change of attitude, at least before we have reached a tipping-point at which further deterioration is inevitable.[4]

ingmar.persson@filosofi.gu.se

REFERENCES

Gardiner, Stephen. 2011. *The Perfect Moral Storm*, Oxford: Oxford University Press.
Marshall, George. 2014. *Don't Even Think about It*. London: Bloomsbury.
Parfit, Derek. 1984. *Reasons and Persons*. Oxford: Clarendon Press.
Persson, Ingmar and Julian Savulescu. 2012. *Unfit for the Future: The Need for Moral Enhancement*, Oxford: Oxford University Press.

4] This paper was presented at a workshop in Bucharest in June, 2017. Thanks to all participants for helpful comments.