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Individual Responsibility for Anthropogenic Global Climate Change

Changing Society or Changing One's Behavior

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'Today we face the possibility that the global environment may be destroyed, yet no one will be responsible' (Jamieson 1992, 149).

Introduction

When we think of anthropogenic global climate change (hereafter AGCC) and its causes, there are a lot of different questions to be asked concerning responsibility. Are individuals to be held responsible for their greenhouse gas (hereafter GHG) emissions? Do we have any moral obligations to reduce our individual GHG-emissions? Do individuals have certain duties in face of a collective action problem? Or does this duty only lie in the promotion of collective action through active citizenship, as suggested by Walter Sinnott-Armstrong (2005)? These questions, and others, can be raised when we are concerned with the environmental climate debate. This thesis will focus on individual responsibility for luxury GHG-emissions.

Because we are all starting to feel the effects of AGCC, it has become a topic of much discussion. We face the very serious possibility that on a rather short term, global warming and its devastating effects will lead to mass migration. Millions of people will be forced to flee their homes. This is due both to the rise of sea-levels as well as droughts. Not to mention the more unpredictable weather patterns that occur which involve more hurricanes and wildfires. According to the 2018 Intergovernmental Panel on Climate Change (IPCC) report, we now have only about a decade to drastically reduce GHG-emissions in order to stop the earth from warming more than 1,5 degrees Celsius (IPCC 2018). As this is unlikely to happen, chances are that there will be many environmental migrants in the near future. As we have already seen over the last few years with mass migration due to wars in the middle-east, this can easily lead to violence and conflict.

Millions of people will die due to climate change. The reason being, that climate change will lead to mass migration, starvation and floods all over the globe within the next few decades if we sit idly by. If we are to stop this from happening, we need to take a closer look at who is responsible for contributing to climate change. It is very easy to ascribe responsibility for GHG-emissions only to big companies and leading world powers such as America and China. However, individuals also contribute to global warming and climate change, be it to a much smaller degree. The combined efforts of individuals could lead to a rise or decline in GHG-

emissions. Therefore, this thesis will look into the question whether or not individuals have moral obligations to reduce their GHG-emissions.

The scope of this thesis is part of the wider debate on environmental ethics and responsibility issues. I will argue against the claim advanced by Sinnott-Armstrong that individuals have no moral obligation to avoid luxury emissions. I argue that individuals do have a forward-looking responsibility-as-obligation (i.e. duty) for collective action problems such as climate change. Even if climate change creates a collective action problem, this does not mean that individuals are absolved from responsibility. Despite AGCC forming a collective action problem, individuals can still have responsibilities to bear for their individual contributions to the problem.

My argument against Sinnott-Armstrong is twofold: First, I will show that individual causal inefficacy (or ICI) does not apply to AGCC and its produced collective action problem. Second, I will turn to several general moral principles (GMPs) that can be applied to individuals in order to reduce the severity of AGCC and, thereby, overcoming the collective action problem it has created. The relevance of this thesis, is that it gives clarity on the flaws in the argument delivered by Sinnott-Armstrong and his proponents. By focusing on the specific example of gas-guzzling used by Sinnott-Armstrong for a luxury emission, we will see the flaws in his argument more clearly. After all, if his argument holds for the exorbitant given example, I cannot hope to prove that individuals bear moral responsibility for less extravagant examples for individual contributions (i.e. luxury emissions) to AGCC.

Definitions and Distinctions

Let us first of all clarify some definitions and introduce a few distinctions that are necessary throughout the rest of the thesis. A collective action problem is a problem where the optimal outcome overall could be brought about by cooperation, but for individual actors it is rational to act out of self-interest. Individuals thereby fail to cooperate and thus fail to achieve the optimal outcome overall. AGCC is not only a collective action problem, but a problem that is brought about not by one specific action or harm, but by millions of small contributions. A single individual or entity on its own cannot be held responsible for the problem, because one individual or entity cannot produce the necessary and sufficient harm that causes the bigger problem. It is thus a problem that is collectively formed by a variety of individual actions.

There is a difference between aggregate individual actions, and actions produced by a collective. For instance, when many individuals decide to start traveling to work by public transport rather than by car, this could lead to overcrowded trains and buses due to the aggregate

of individual actions. If, on the other hand, a community collectively decides to use public transport more often, they can collectively ask the government to consider a better transport network in order to accommodate all travelers. Of course, individuals can ask the government for the very same thing. But let us say that this will only lead to the same outcome if the aggregate amount of individual requests is the same as when the amount of members of the collective does this request. Most likely, there will be individuals who will not send a petition to their government and thereby not achieve the same number of requests as when the collective does this.

Moreover, there is a distinction between luxury emissions and subsistence emissions. Subsistence emissions are the emissions that are necessary to keep us alive such as burning fires to cook, or boiling water. We lose life prospects if we would have to reduce our GHG-emissions to zero. Some sacrifices are simply too great. So we try to mitigate the burden on individual climate duties. My focus in this thesis is on individual luxury emissions in particular. Luxury emissions are GHG-emissions that are not necessary for our subsistence, but rather to enjoy oneself. The example given by Sinnott-Armstrong of such a luxury emission, is the case of someone driving a gas-guzzler for his own pleasure on a sunny Sunday afternoon. Some argue that contributing to climate change is permissible because the contribution is insignificant; we take part in producing a collective harm, and not in causing a direct harm to anyone in particular (Jamieson 2014, Johnson 2003, Kingston & Sinnott-Armstrong 2018, Sinnott-Armstrong 2005).

Because climate change is a 'large-scale intergenerational collective action problem', it falls short of a paradigm moral problem where you can see the direct harm of one individual on another (Fragniere 2016, 799). If there is even a chance that GHG-emissions have a causal effect on climate change, and it turns out to be morally wrong, then we might as well turn the tables around and say that -just to be on the safe side-, we should not contribute to GHG-emissions. If it does not contribute to the elimination of the problem, at least we will be sure not to contribute to the increase of the problem. We could maintain that even if we do not know whether or not it is morally wrong, it is still morally better to refrain from luxury emissions.

There are two putative individual duties when it comes to climate change that are of particular interest: 'The duty to reduce one's carbon footprint' and 'the duty to promote and support collective action against climate change' (Fragniere 2016, 799). The first being a bottom-up approach, which entails individual changes in lifestyle and social norms. The bottom-up approach focuses on the individual duty one has to make changes in his or her personal life.

The second is a top-down approach, this entails changing policies and the promotion of institutional solutions. The top-down approach focuses on the duty one has to support collective action. They are interrelated as they can boost one another. Sinnott-Armstrong argues that it is the governments job, rather than the job of each individual, to fight these collective action problems. Others maintain that precisely because this does not happen at the collective level, individuals have to take action into their own hands. When the collective responsibility is unfulfilled, this can lead to duties by individual members of the collective that promote collective actions.

Thesis Structure

To defend the thesis that individuals are morally responsible for their contributions to climate change, we will look into the difference between individual and collective moral obligations in the first chapter. I will argue that even though collectives have a greater influence to mitigate GHG-emissions when we are concerned with AGCC, individuals can still be held morally responsible for their luxury emissions. The problem of AGCC should therefore not be viewed solely as a collective action problem, but also as a problem formed by the aggregate of individual actions. The next problem we face, is how hard it is to assert the causality of individual contributions to AGCC, which makes backward-looking responsibility hard to ascribe to individuals. Therefore, I will focus instead on forward-looking responsibility which enables individuals to choose the course of action that produces the least amount of harm overall. When individuals take on forward-looking responsibility for AGCC, they will be able to avoid or reduce further future harm.

The following chapter will focus on the problem of individual causal inefficacy. Individual actions are considered to be either not necessary, or not significant enough to causally affect AGCC, and are therefore considered to be causally inefficacious. We will look into this claim and see what exactly it is based on, before showing that while isolated individual GHG-emissions might have imperceptible effects, sets of acts still lead to moral significance. The only argument that holds up under scrutiny appears to be that there is no direct causal pathway between the cause and the harm. However, even if there is no direct causal pathway, we can still speak of indirect contribution to the causation of a future harm.

In the third chapter, I will discuss some general moral principles that can be used to ground individual moral responsibility for contributing to collective action problems. More importantly, some of these general moral principles can show that individuals have moral obligations to refrain from luxury emissions. I will argue that as luxury emissions are not

necessary for subsistence, they can easily be replaced by other courses of action that inflict less future-harm. There are often reasonable alternatives to avoid luxury emissions. Therefore, I will provide some general moral principles that obligate the individual to give up many luxury emissions.

The last chapter will recap the most important arguments of the previous chapters, before drawing to a conclusion. One should refrain from luxury emissions if there are reasonable alternatives available. The joy derived from luxury emissions does not morally outweigh the expected disvalue such emissions have on climate change.

Chapter 1: Individual and Collective Responsibility for AGCC.

This thesis has a focus on luxury emissions and the individual responsibility for greenhouse gas emissions, therefore, I will take the article by Sinnott-Armstrong (2005) as a starting point for my own argument. Whereas Sinnott-Armstrong argues that individual luxury emissions are permissible because they have no causal effect on climate change and therefore cause no harm, I will argue that individual luxury emissions are morally impermissible because they in fact contribute to AGCC and thereby cause harm. In the first two chapters we will consider wrong-doing in the consequentialist view which provides the claim that harm is required for wrong-doing. The main premises and conclusion of the article by Sinott-Armstrong are:

- P1: The 'Obligation Derivation'. Individual moral obligations cannot always be directly derived from collective moral obligations (Sinnott-Armstrong 2005, 295).
- P2: 'Individual Causal Inefficacy' (ICI). Luxury emissions are not sufficient to causally harm others when taken in isolation, e.g. wasteful driving: "An individual joyride is neither necessary nor sufficient for global warming" (Almassi 2012, 6).
- P3: 'General Moral Principle' (GMP). There is no general moral principle that proves that individuals have a moral obligation not to drive a gas-guzzler for fun (i.e. not to contribute to global-warming).
- Conclusion: An individual joyride in a gas-guzzler has no causal role in global warming, therefore, global warming gives no individual the moral obligation to refrain from such luxury emissions.

I will use these premises as a basis for the structure of my thesis. Each premise will be discussed in one of the three following chapters. I will argue in this chapter that there is a difference between individual and collective responsibility when it comes to AGCC. We will look into the claim that individual moral obligations cannot be derived from collective moral obligations to understand the difference between the two. After all, what we are after, are the individual moral responsibilities one has for his or her luxury emissions. If individual moral obligations cannot be derived from a collective's failure to take responsibility for a moral obligation, then they must be brought about by something else.

To start with, we will need to distinguish between individual and collective responsibilities for which we will use the Obligation Derivation. To substantiate the first premise, Sinnott-Armstrong uses an example of a collective obligation by the government to repair a bridge that is becoming dangerous to pass (Sinnott-Armstrong 2005, 295). The bridge is dangerous for all traffic that passes the bridge, therefore the government has a moral obligation to repair the bridge. After all, one of the main purposes of any government is to secure its citizens safety. If the government, however, does not fulfil that duty, it does not follow that the moral obligation to repair the bridge then falls on an individual member of the collective on whose behalf the government is supposed to act. Sinnott-Armstrong argues that individuals can only encourage the government to fulfil its obligation to repair the bridge. Sinnott-Armstrong may be right in arguing that an individual does not have to take on the unfulfilled obligations of the collective in some cases, but this does not appear to be so in other cases. The given example rightly exempts individuals for taking on obligations of a collective. Sinnott-Armstrong acknowledges that this reasoning does not apply to all collective moral obligations such as the collective action problem posed by AGCC.

Before we go into more detail on the Obligation Derivation (P.1) and the other premises of Sinnott-Armstrong, I think it is important to clarify what exactly the debate is about, and the context in which this debate takes place. In the first part of this chapter (1.1), I will give a quick summary of the context and debate, after which I will explain the most important key concepts used in this thesis in the second part (1.2). Only then can we move to the third part (1.3), and dissect Sinnott-Armstrong's Obligation Derivation and the three hidden premises it implicitly assumes.

1.1: Context and Debate

We, as humans, can affect climate change, and in fact have been affecting climate change rather dramatically over the last hundred years. The main cause of this being the emissions of greenhouse gases due to human activities. Greenhouse gases act as a blanket around the world, making it harder for warmth to escape and thereby insulating the earth. There are several greenhouse gases, the most famous and important ones being carbon dioxide (CO2) and methane (CH4). Carbon dioxide is a natural gas that has always been part of our atmosphere. In the high concentrations we are currently experiencing, this gas leads to global warming which affects the climate and leads to global climate change. Most carbon dioxide enters the atmosphere by the burning of fossil fuels such as oil, coal and gas. Methane is also a natural gas that forms no problem for the environment as long as its concentration is not too high in the

atmosphere. Unfortunately, the amounts of methane in the atmosphere are now far too high due to the production and transportation of coal and oil. Moreover, methane emissions result (for a large part) from livestock. Due to the growing world population and the human *craving* for meat and dairy products, there is now more livestock than ever before, causing more and more methane to be released into the atmosphere (IPCC 2018).

The underlying argument in this specific debate is as following: (1) it is morally wrong to do harm; (2) climate change harms people; therefore, (C) it is morally wrong to contribute to climate change. The burning of fossil fuels increases the amount of greenhouse gasses in the atmosphere and thereby warms the world. This leads to much suffering all around the world, both for humans as well as other creatures. As the richer and better-developed nations have contributed significantly more to the rise of GHG-emissions, they are seen to have a bigger moral obligation to act and help reduce the amounts of GHG-emissions. The reason for better-developed nations to have a bigger obligation to help reduce GHG-emissions, is that they have much more large-scale industrial activity which leads to GHG-emitting activities, which in turn leads to human suffering due to climate change (Caney 2005). Whatever an individual does to reduce her personal carbon footprint will have little to no effect on the grand-scale problem of climate change. The problem of individual causal inefficacy is that the actions of an individual make little difference and play no causal role in reducing the GHG-emissions overall.

1.2: Key Concepts

In this thesis, I will ask what -if anything- makes behavior that contributes to climate change wrong. Both individuals and collectives can have moral responsibility, and fail them. Moral obligations come in different types, both negative and positive. The most important negative obligation being the moral obligation not to harm others. The positive obligation which plays the most prominent role in this thesis is the obligation to perform certain actions which produce the least amount of harm overall, even if this obligation sometimes conflicts with our personal interests. When we act in a certain way, we are responsible for the consequences that these actions cause. We are then responsible for the outcome of an action on the consequentialist account. At the same time, we can also be morally responsible for omitting to act.

I will draw on Peter Strawson's theory of moral responsibility, which holds that: ‘moral responsibility consists of reactive attitudes, for example resentment or gratitude, we hold towards each other as co-members of the moral community' (Fahlquist 2009, 113; Strawson 1962). There are many forms of responsibility such as causal responsibility, remedial responsibility, liability and moral responsibility. In this thesis I am mostly interested in moral

responsibility, i.e. the appropriateness of blame. Moral responsibility can be used for individuals in particular to help them refrain from luxury emissions due to the reactive attitudes of others within a moral community. This can both be responsibility-as-blameworthiness and responsibility-as-obligation, the former mostly being used in backward-looking responsibility cases; the latter for cases of forward-looking responsibility. There is a difference between backward-looking responsibility and forward-looking responsibility. Backward-looking responsibility has most to do with causation: if one has acted in a certain way in the past, she is responsible for the consequences of this action in the present. Forward-looking responsibility on the other hand, focuses on the duties and obligations that we have towards others, to act in a certain (morally right) way. Sometimes people are not to be held responsible for their actions and should be excused from blame. This is the case for instance, if an act was not voluntary due to compulsion, duress or ignorance. Collective and individual responsibility will be explained more thoroughly in this chapter (Caney 2008; Fahlquist 2009; Garvey 2011; Hiller 2011a).

While AGCC could be reduced if people were to cooperate in joint action against the problem, many will not do so because it would be irrational to try and achieve this when there is no guarantee that others will do so as well. When only a few people cooperate while others do not, they will bring themselves in a position where they are worse off than they were at the start. Therefore, many people will not be inclined to adjust their behavior and reduce their individual GHG-emissions without the guarantee that others will do so too. A single individual or entity on its own cannot be held responsible for the problem, because one individual or entity cannot produce the necessary and sufficient harm that causes the bigger problem. It is thus a problem that is collectively formed by a variety of individual and collective actions. A problem is thus a collective action problem if, and only if, the problem could be overcome by collective action, but is not overcome due to personal interests that outweigh the best overall outcome. There is an immediate difference apparent between the bridge-example mentioned earlier, and the problem of climate change. The responsibility to perform proper maintenance on state-owned property such as bridges clearly lies with the government. It would be irrational for individuals to invest in fixing the bridge on their own, even though it would be the best overall outcome if the bridge was fixed. AGCC on the other hand, has another problem: mainly that the issue of responsibility is much harder to ascribe to a certain person or group.

Because ACGG creates a collective action problem, it is very hard (if not impossible) to ascribe responsibility for the harms caused by it. Some philosophers, such as Sinnott-Armstrong, Baylor Johnson and Dale Jamieson, maintain that individuals have no moral obligation to reduce their GHG-emissions; instead, they only have a moral obligation to work

towards a collective agreement to solve the problem of global warming. In many cases a collective action problem is seen as a problem that can only be resolved through large-scale policy change, rather than individual (unilateral) actions (Sinnott-Armstrong 2005; Jamieson 2014; Johnson 2003). In the case of global warming, however, there are many different aspects that need to be considered before dismissing individual responsibility for GHG-emissions altogether. Let us look into what the obligations might be and entail for individuals as well as for collectives.

The distinction mentioned earlier between forward- and backward-looking responsibility provided by Fahlquist (2009) will be used. [1] Where backward-looking responsibility is most often used when holding somebody blameworthy for an action that produced a negative outcome, forward-looking responsibility is used to account for people's choices between reasonable alternatives. A person can then be held morally responsible for choosing a course of action that causes harm over another course of action that inflicts less harm; if, and only if, there were reasonable alternatives for the individual to choose from.[2] If there is individual responsibility for ACGG, it would lie in the forward-looking responsibility of individuals: if one has reasonable alternatives to reduce his or her carbon footprint, one should do so. People who are in a better situation financially, are often in a better position to contribute to the solution of the climate harms as they have more reasonable alternatives to choose from. Collective responsibility is concerned with institutional responsibility because the institutions can provide individuals with alternatives: 'Governments and corporations are responsible because it is in their power to create reasonable alternatives for individuals' (Fahlquist 2009, 119). By taking forward-looking responsibility as an institutional agent, the extent to which individuals can be held responsible in the forward-looking sense, also increases.

1.3: Obligation Derivation

Now that we have discussed the most important key concepts and distinctions such as the collective action problem, forward-, and backward-looking responsibility and luxury GHG-emissions, we can move on to the underlying premises of the Obligation Derivation which apply to the differences between individual and collective responsibility. This will be done in the following two sections. There are certain hidden premises in Sinnott-Armstrong's Obligation

[1] I should acknowledge that Jessica Nihlén Fahlquist is not the first to use this distinction. However, Fahlquist uses the distinction in a way that applies well to the current debate. I would also suggest reading Iris Marion Young: Responsibility for Justice (2010) for more on this distinction.
[2] This idea is based on James Garvey's notion of 'can implies ought'. Garvey (2011).

Derivation. The argument (P1) only works, if, and only if, the following three assumptions are taken for granted:

- P1.1: Failing to fulfil an obligation is morally wrong.
- P1.2: Collectives can have agency and obligations, and can thus be held responsible when they neglect to fulfil their obligations.
- P1.3: Individual members of the collective are not responsible for the collective's neglect to fulfil its obligations.

In the last section I have used Strawson to show that P1.1 holds: failing to fulfil an obligation is indeed morally wrong. Individuals are morally responsible and receive reactive attitudes from others within their moral community. When one fails to fulfil an obligation, he or she is considered to be responsible for this neglect and can therefore be blamed. Let us therefore move on to the second premise of group agency.

1.3.1: Collective Agency

When we look at P1.2: 'Collectives can have agency and obligations, and can thus be held responsible when they neglect to fulfil their obligations', we can see that Sinnott-Armstrong considers collectives to have obligations and carry responsibility. We will need to establish that collectives have moral obligations in order to hold them responsible for their actions. It is important to be able to ascribe responsibility to collectives, because without it, there would be gaps in responsibility. Consider a group that cannot be held responsible for its actions; this could lead to individuals that form the group being excused from responsibility entirely. It would lead to a deficit in responsibility as no one is considered to be the bearer of responsibility. In this case, a collective is an organized group, made up of individuals with common intentions or a common goal.[3] Sinnott-Armstrong, implicitly assumes that there are not only individual obligations, but also collective obligations. We hold an individual responsible for not fulfilling its obligations, because she is a moral agent. To hold a collective responsible for not fulfilling its obligations, the group has to be regarded as a collective moral agent. This means that the collective is not simply the aggregation of individual agents, but a collective agent with its own status of a separate entity.

[3] See Margaret Gilbert (2006) and Joel Feinberg (1968) for a more detailed version of what a collective is considered to be. For the purposes of this thesis, however, this will suffice.

As we have seen earlier, we hold an agent responsible for an action when he or she is a candidate for blame or praise. We can talk of moral responsibility when an agent faces options to act that are of normative significance; the agent is in possession of the judgmental capacity to judge this normative significance; and the agent in question is in control of the choices to choose from (List & Pettit 2011, 1-5). These conditions are to be met in order to speak of individual responsibility, as we would not reasonably hold someone responsible if one of them is violated. These conditions are necessary and sufficient to hold someone responsible (List & Pettit 2011). These same three conditions are deemed to be necessary not only for moral responsibility of individuals, but they can also be applied to group agents. Only the second condition on the judgmental capacity of a group agent, and the third condition of relevant control can be object of some concern. It simply depends on what kind of group agent we are concerned with. Just as there are different levels of control in any given action, the ability to form judgments on normative propositions can have varying degrees as well depending on what the group agent is considered to be.

Groups that bear agency as a collective are formal groups such as governments, international organizations and corporations. In a great many cases, we do in fact hold collectives such as governments or corporations responsible for their (in)actions. For instance: if the bridge mentioned earlier was to collapse, causing a person to die, we would hold the government responsible for its failure to fulfil the obligation of proper maintenance. I agree with Alberto Giubilini and Neil Levy that a collective is morally responsible if it is worthy of blame or praise: '[W]hen we say that some group can be morally responsible in an intrinsically collective way, we mean that they can be deserving of blame, praise, or sanction, entirely in virtue of past actions or omissions, in a way that is intrinsically collective' (Giubilini & Levy 2018, 192-3).

Now that we have established collectives can indeed be considered as entities to which we ascribe responsibility for neglecting their moral obligations, we can safely establish that P1.2 holds as well. Next, we will need to prove that the burden of the collectives' neglect to fulfil its obligations does not fall on individuals to bear for Sinnott-Armstrong's Obligation Derivation to be correct.

1.3.2: Individual Responsibility for Collective Obligations

Let me make one last clarification to limit the scope of this paper. When I am discussing individual responsibility, I will primarily be concerned with individuals as citizens and

consumers. When I am discussing collectives, I am primarily concerned with institutions such as governments and corporations.

Collective responsibility should not be considered as individual responsibility scaled up to a collective level, because then it would only be the aggregation of responsibilities carried by the individuals that form the collective (Giubilini & Levy 2018, 194). As the collective is considered to have its own entity as a responsible agent, the responsibilities it carries can diverge from the responsibilities carried by its individual members. When the person in charge of maintenance within the collective fails to fulfil his or her duty, we will still ascribe responsibility to the collective, and not only to the individual that was given the job to perform proper maintenance. By the same token, if a collective fails to fulfil an obligation or duty, we cannot hold each individual member of the collective responsible for the neglect. Imagine a collective such as a corporation with different branches. If one of the employees in the IT-department fails to upgrade the newest firewall, and thereby fails to meet his duties, we would hold this employee as well as the collective responsible. However, we would not hold an employee in human resources of that same corporation responsible for this neglect.

Individuals have various kinds of moral obligations such as to keep ones' promises and not to cause harm. Does it follow that groups bear the same obligations as individuals? I will maintain that there is a difference between individual obligations and group obligations. But some, such as Stephanie Collins and Holly Lawford-Smith argue that there is parity between individuals' and groups' obligations to prove that collectives and individuals in fact bear the same obligations. According to them, there is only a difference between the scope of group obligations, and the strength of groups' obligations (Collins & Lawford-Smith 2016, 40).[4] The obligations-to-act are considered to be the scope of collective obligations: there are preconditions to be met in order for an agent to be the bearer of certain obligations. As group agents satisfy the same preconditions as individual agents do, they can have the same obligations. Thus, '… the range of obligations that groups are subject to, and the all-things-considered demands that those obligations can place on groups', are on par with the obligations that individuals are subject to (Collins & Lawford-Smith 2016, 55). According to Collins and Lawford-Smith then, if it is the case that collectives bear responsibility for climate harms, then individuals bear the same kinds of obligations for such harms. While it is arguable that the obligations of collectives are in fact on par with individual obligations, I think it is fair to say that they *can* bear the same obligations.

[4] Group agency and collective agency are used interchangeably from here on forth.

To sum up: Collectives can indeed have agency and can therefore carry obligations. When obligations are not fulfilled, a collective is responsible for its neglect. When a collective fails to fulfil an obligation, we do not always hold individual members of that same collective responsible for the neglect. Thus, the Obligation Derivation (P1) holds.

1.4: Conclusion

In this chapter we have first discussed the context in which the debate takes place, after which we have defined some of the key concepts that will be used throughout this thesis. We have then examined some arguments on the differences between individual responsibility and collective responsibility and their respective obligations. We have been looking into the Obligation Derivation, to see whether or not individual moral obligations can always be derived from collective moral obligations. First, we have examined what it means for a group to have agency and thus be responsible for its (in)actions. Second, we have investigated what moral reasons there are (both individually and collectively) for dealing with a collective action problem. It is true that individual moral obligations cannot always be directly derived from collective moral obligations, therefore the Obligation Derivation (P1) holds. While individuals can have the same obligations as collectives, they need not be directly derived from them, and they can in fact differ a great deal.

Even though there are plenty of options available for an individual to reduce its carbon footprint and have moral reasons to do so in order to reduce AGCC, individuals are most often not considered to be morally responsible to do so. The reason being that there is no direct causal link between the individual emissions and AGCC. We will look into this argument more closely in chapter 2. Even if there is individual causal inefficacy (ICI), there still might be (other) moral reasons to reduce individual carbon footprints which will be discussed in chapter 3. Now that we have clarified some of the most important concepts, we will also use these in the following chapters. The Obligation Derivation holds, therefore, we will look into Individual Causal Inefficacy (P2) in the next chapter to see if it is true whether or not individual GHG-emissions are in fact causally inefficacious.

Chapter 2: Individual Causal Inefficacy (ICI)

In this chapter we will look into the second premise (P2) which holds that individual luxury GHG-emissions are neither necessary nor sufficient for global warming. The second premise of Sinnott-Armstrong is concerned with individual causal inefficacy (ICI). To limit ourselves to a certain individual action that is argued not to contribute to global warming, let us use the same example Sinnott-Armstrong uses: wasteful driving. The example of wasteful driving is used in order to try and convince us that there is no individual moral obligation to refrain from GHG-emitting luxury activities. Wasteful driving is a rather extreme example of a luxury emission; if it turns out that this luxury emission is indeed causally inefficacious, the argument for ICI holds. This premise entails that an individual joyride is neither necessary nor sufficient to cause global warming on its own (Almassi 2012, 6). While it is legal to go for a drive for fun on a sunny Sunday afternoon, should one refrain from doing so because of global warming? Does global warming make a drive for ones' own pleasure morally wrong (Sinnott-Armstrong 2005, 296)? Sinnott-Armstrong argues that wasteful driving does not contribute directly to global warming and it does not immediately cause harm to others, therefore, it is not a blameworthy act. Thus, one does not have the obligation to refrain from wasteful driving.

For the sake of the argument, this chapter will allow for the consequentialist premise that wrongdoing requires harm. It will not be until the third chapter that we will discuss the non-consequentialist view. There are several reasons why wasteful driving is a case of ICI. Let me once again put these in premises, which will be used as a guideline for the rest of this chapter. I will use the four reasons given by Augustin Fragnière why individuals appear to bear no responsibility for GHG-emissions because the emissions are considered to be causally inefficacious:

- P2.1: Significance. '[M]y emissions are too *small* to be significant' (Fragnière 2016, 800, original italics).
- P2.2: Thresholds. '[D]ue to *climatic thresholds*, my emissions cause no marginal harm' (Fragnière 2016, 800, original italics).
- P2.3: Causality. '[T]here is *no direct causal pathway* between particular emissions and climate-related harms' (Fragnière 2016, 800, original italics).
- P2.4: No difference. '[T]he same amount of GHG *will be emitted anyway*' (Fragnière 2016, 800, original italics).

I will use these same reasons for ICI as Fragnière does, as they reflect the most common reasons given by proponents of the ICI argument, such as Jamieson, Johnson and Sinnott-Armstrong. Let us examine each of the four premises in turn, to see whether they actually hold up under scrutiny. I will apply each of the given reasons to the example of wasteful driving, in order to determine whether or not it is true that the individual joyride is indeed neither necessary nor sufficient to be a cause of global warming. We will find that only P2.3 actually holds up, as we cannot prove a direct causal pathway between singular emissions and climate harms at this moment. Because the significance argument, the threshold argument and the no difference argument all fail, we cannot speak of individual causal inefficacy: Most of our individual causes do have effects on the climate. This chapter will therefore conclude that ICI does not apply to individual luxury emissions such as driving a gas-guzzler for fun.

2.1: Insignificance of Emissions

One of the reasons for causal inefficacy is often said to be that individual emissions are too small to be of significance. This applies to the claim of the individual joyride not being sufficient to cause global warming. One of the examples given by Sinnott-Armstrong to illustrate the insignificance of individual actions, is the example of an overflowing river. His claim is that when a river is already about to flood, it makes no difference whether or not an individual pours a glass of water into the river because it cannot be considered the proper cause of the flood (Sinnott-Armstrong 2005, 298-9).

On its own, the pouring of one glass of water is indeed not sufficient to cause the river to overflow. This does not seem analogous to global warming at all. The river flooding is probably caused by heavy rainfall, whereas global warming is (mostly) caused by human GHG-emissions.[5] Even if this would not be the case, however, one could even argue that pouring one glass of water into the river upstream is not harmful in itself. But what if we imagine one billion people pouring a glass of water into the river upstream at the same time. Would this not cause the river to flood, as there is suddenly 250.000 extra cubic meters of water added to the river? The fact remains, of course, that if one person abstains from pouring his glass of water into the river, others will keep on doing so, thereby still contributing to the cause of the flood. The same principle can be applied to one drive in an SUV: the emissions produced by this joyride, are

[5] One could argue that the river is flooding due to the melting of ice-sheets, which can be led back to human GHG-emissions. Even if this is the case, it does not affect the argument.

perhaps not sufficient to cause harm on their own. It is only by the aggregate of individual actions that it becomes a cause of the harm.

The problem we are confronted with is twofold: we either have to concede that without perceptible consequences, we cannot speak of a moral wrong; or we will have to show that there are in fact consequences, even if they are imperceptible. This thesis will argue for the latter. When an act has very small -or at least imperceptible- effects, we cannot say that such an act is not wrong (Parfit 1984). We misconstrue the way we think about the consequences of such actions, or we make what Derek Parfit calls a 'mistake in moral mathematics' (Parfit 1984, 70). We should never consider the consequences of only our personal acts in isolation, but rather think of the effects of sets of acts because they in fact do bring about great harm when taken together (Parfit 1984, 70). The consequences of one act of driving an SUV are imperceptible, and therefore appear to be morally insignificant. But imperceptibility does not imply insignificance. Imperceptibility only implies that we cannot perceive with our senses what the effects are, whereas insignificance implies that there aren't any effects to perceive. A hill that has a very slow and imperceptible slope, will still have the effect of making for a slower or tiring bike ride uphill, we would therefore not be able to say that the imperceptible slope is insignificant. Even though the individual contributions have very little and imperceptible effects, they still contribute to all GHG-emissions globally. It is contradictory to say that the small contributions have no effect and make no difference at all, while at the same time admitting that all small contributions taken together in fact have an effect and make a major difference to the harm.

Because the emissions are so very small compared to all carbon dioxide emitted over the world, it can lead to the paradox of small effects: '[T]he fact that a set of morally insignificant actions can bring about morally significant harm' (Fragnière 2016, 800). But if we would have to consciously think on every single (insignificant) action we undertake because of the consequences it might have, our lives would become impossible. We would have to think so much that we would not be able to act at all. Some say that perhaps we should only consider the actions that have significant consequences instead (Sandberg 2011; Jamieson 2014; Kingston & Sinnott-Armstrong 2018). This leads us back to the same mistake in moral mathematics mentioned earlier: we cannot know the consequences at all times, but that does not mean that the consequences are insignificant.

Even if the difference is (nearly) imperceptible, our actions can make a difference. There are too many factors at play to make an accurate guess on what a person's real energy consumption is. Think of local food vs food produced overseas, emissions used to grow cattle,

traveling by bus rather than car etc. It is incredibly difficult to calculate a person's *actual* carbon footprint. We only know the emissions of the country in its entirety: 'Current technologies are not nearly sophisticated enough to measure a single individual's single action's effect on the global concentration of GHGs in the atmosphere (although in some cases we can estimate it)' (Lawford-Smith 2016a, 66). The individual emissions of a single action are so tiny, that they are very hard to register. Only when we look at a million (or sometimes more) of such actions taken together will we see any difference in the amounts of GHGs emitted. But even though the effects of such individual emissions are imperceptible, we can still argue that they add up in the long run.

To sum up: imperceptible consequences do not imply insignificant consequences because we are dealing with an intergenerational large-scale phenomenon.[6] An act with imperceptible consequences can still be morally wrong when we take the individual act out of its isolation and see it as part of a set of acts which produces harm.

2.2: Climatic Thresholds

Another reason for causal inefficacy when it comes to AGCC is that individual emissions cause no marginal harm due to climatic thresholds. Climate harms are considered to be a threshold phenomenon: only after reaching a certain concentration of GHGs in the atmosphere it starts to affect the climate and thereby cause harm. There is no '*strict* correlation between the concentration and climate-related harms - i.e. that every additional molecule of a greenhouse gas makes the world worse' (Lawford-Smith 2016a, 69, original italics). Because no such strict correlation is visible to us, one could argue that only when we reach certain thresholds we can see the visible harm caused by GHG-emissions. There are different thresholds to be reached. Some are micro-thresholds such as the amount of airplanes that fly which will increase GHG-emissions. Some are macro-thresholds such as the smelting of the ice sheets of the arctic which will lead to the rise of the current sea-level. The more micro-thresholds we cross, the more likely it is that we eventually cross a macro-threshold as well.

Let me give an example of crossing such a micro-threshold. Peter Singer argues that one should become a vegetarian because it would lead to a reduction in the demand of meat. The reduction in demand leads to a reduction in breeding animals by the animal industry (Singer

[6] I will not go into detail on the intergenerational topic, as it could very well lead us to the non-identity problem. I will not discuss this debate because it has no direct consequences for my own argument. My argument still stands, even if we only apply it to people living in the present, without considering future generations that do not yet have an identity. This does not imply, however, that climate harms do not affect future generations.

1980, 335). The problem of course, is that there are still billions of other consumers who will continue to eat meat. Therefore, the difference of one person not eating meat will be too tiny to make a difference in the demand of meat. We cannot really say that it has a causal effect on the number of animals killed and bred. A response to this objection is the threshold-principle: if 10.000 people stop eating meat, then one less factory farm is needed to supply the market. As the threshold is reached, the actions of the vegetarians combined in fact make a difference as the amount of factory farms is reduced. This might be the case for going vegetarian, but what does it mean to go green? This is a rather vague and new concept which has not yet been fully explored. When we are concerned with climate problems, there is still a lot we do not know.

In 2012, the climatic threshold for absorbing CO2 was at around 60% of the annual GHG-emissions. This means we could emit up to 23 billion tons of CO2 annually without going over the absorptive capacity of the world. But unfortunately, we go over it by another 40%, as we emit 38 billion tons of CO2 annually instead (Fragnière 2016, 801). Right now, we have already gone past 40 billion tons of CO2 emitted annually. Some argue that because we do not know whether or not we cross a certain threshold, we are not obliged to refrain from emitting GHGs (Cripps 2013; Jamieson 2014; Sandberg 2011; Sinnott-Armstrong 2005). As a response to the uncertainty of crossing the first climatic threshold of 23 billion tons of CO2, many environmental activists argue that if we are to stop the earth from warming any further, we should not only reduce the GHG-emissions to the absorptive capacity of the earth, but actually offset GHG-emissions completely. This makes even the first 23 billion tons of CO2 emitted too much. If we offset GHG-emissions entirely, we could then perhaps reverse the negative effects of climate change.

Let us now consider the case of overdetermination: once we are over the threshold already, it does not matter anymore by how much we overshoot the threshold. Or, as Jamieson puts it: 'climate change will occur whether or not I needless drive or thoughtlessly jet' (Jamieson 2014, 288). This is incorrect, as it is not one threshold that can be reached, but a whole bunch of micro-thresholds that can be reached and crossed; each causing its own harm, or contributing to the greater harm. As each single emission is part of a set of emissions, there is always a possibility that my emission is, or is not, part of the sufficient set that crosses a threshold. Any given emission is thus an overdetermining cause of climate harms; but as they do not make a direct difference, they are argued not be a proper cause. I argue that overdetermining causes are still proper causes as they contribute to the cause (Pellegrino 2018, 4). Each contribution can increase the problem, therefore contributing to the cause, which is in fact being part of the cause. The whole point of the thresholds is simply that some of the

contributions made by people will cause even more harm than others. Each activity that emits GHG contributes to the harm caused. The only difference is that there is no direct causal link visible. The difference lies between actual marginal harm and expected marginal harm: 'In other words, you ought to refrain from emitting, because there is a *risk* that your emissions will trigger a harmful threshold' (Fragnière 2016, 802). Overdetermination is not applicable to the problem of AGCC, as all emissions above any given threshold will worsen or quicken climate harms.

Apart from the problem that climate change will occur anyway whether or not I contribute to GHG-emissions, the problem with most thresholds is that we do not exactly know when we cross them or what the exact effects this will have on the climate once we cross them. In the case of CO2-emissions, we know that the earth has an absorptive capacity of 23 billion tons, but what the exact effects are once we cross this threshold is still uncertain. We only know for certain that there is a threshold to be crossed, after which the climate and environment will change. As we do not know for certain what will happen, we can only say that difference-making is probabilistic rather than the factual difference that GHG-emissions make. Once we take a look at micro-level thresholds there are a lot of variables that can have impact on the climate change. Some of such variables are whether it is carbon dioxide or methane GHGs that are being emitted, which quantity is emitted, where the emission takes place and when it is emitted. It is hard to foretell what the impact would be, as that would have to be based upon empirical knowledge which we do not yet possess in the present. The harms occur in the future and it can take a long time before they become apparent. However, we already have empirical evidence that more natural disasters such as hurricanes and droughts have occurred over the last decade. The importance of micro-thresholds, then, is that we can reduce the impact of natural disasters by buying ourselves more time to prepare for them, or even reduce their severity by delaying their occurrence (Lawford-Smith 2016a, 69).

Now that we have discussed the threshold-phenomenon, we can see that there is much uncertainty as we do not know when exactly we reach a threshold and what its effects will be when it is crossed. We will therefore have to turn to the expectations of difference-making and the expected marginal harms that will occur in the future, rather than focusing on the causal (in)efficacy of individual emissions (Kagan 2011). I will come back to these questions in chapter three. We simply know too little of the different micro-, and macro-thresholds that affect our climate to be sure our individual emissions in fact cause marginal harm. We do not yet possess the empirical knowledge needed to confirm this. Let us therefore first see if there is indeed no direct causal pathway between my individual emissions and the harms caused.

2.3: No Direct Causal Pathway

As stated before, the argument here is that we cannot predict what harms are caused by individual GHG-emissions. As we cannot see the direct causal pathway of cause and effect due to the smallness of the contributions, it is hard to ascribe responsibility for single emission-acts. On the grand scale of things, it does appear that a single GHG-emission is insignificant. Let us put things in perspective by using some of the figures provided by John Nolt and Fragnière (Nolt 2011; Fragnière 2016).[7] The average American is calculated to emit around 17 metric tons of carbon dioxide every year. Overall, the annual global emissions of the population of the entire world were 38 billion tons of CO2 in 2012. The average American emits about 0.5 billionth of global annual emissions. Even though we cannot see the harms done by individual emissions immediately, we can still try and prove that we do harm future persons. Nolt argues that the consequences of individual actions are actually not negligibly small when it comes to global climate change. He calculates the expected harm done by the average American's GHG-emissions. The calculations provided by Nolt suggest that the average GHG-emissions produced over the lifetime of a single American citizen, cause the suffering and or death of two future persons within the next 1000 years.[8] Besides harming future persons (which leads us back to the intergenerational debate), the calculations also suggest that the GHG-emissions of individual American citizens contribute to the harms that occur within the present generation. The problem with Nolt's paper for our case, is that it focuses on a lifetime of emissions, rather than individual emissions of, say, a day, or even a single GHG-emission. There might be no tangible effects from one emission activity.

Avram Hiller, however, calculates the harm from a single GHG-emission, namely, going on a Sunday drive for fun. If one would go for a 25-mile drive, this would (on average) amount to an equivalent of 14.1 kg of CO2. He then uses the calculations provided by Nolt to argue that '*going for a Sunday drive has the expected effect of ruining someone's afternoon'* (Hiller 2011b, 20, original italics). In other words, the expected harm of an individual act of a GHG-emitting activity such as a wasteful drive, can not be considered to have no expected harm. If we look at the actual figures however, it would not seem to be that case. One individual drive would be 14.1 / 38 billion ton = 0,00000000000037 part of the whole. The problem is still twofold: On the one hand we can see that much harm is caused by GHG-emissions which induce droughts, floods and other extreme weather events. On the other hand, we can see that

[7] Both of their calculations are based on the report of 2014 by IPCC (IPCC 2014).

[8] See Nolt (2011) for the exact calculations.

individual actions seem to make an infinitesimal contribution compared to the global GHG-emissions (Hiller 2011b, 20). However small and (almost) imperceptible the effects of an individual joyride might seem, the amount of GHGs emitted is still larger than zero; therefore, not making it insignificant (as we have seen in chapter 2.1). Individual actions might have marginal effects, but they are not negligible. When only one person dumps his waste in the ocean, the effects will be marginal. We already know, however, that the dumping garbage and plastic in the ocean has devastating effects on the sea life and can most certainly not be called negligible, precisely because it is not done by just one person.

Thus, even if there is no direct causal pathway from individual actions to the climate harms caused by GHG-emissions, there is both an expected harm, as well as an indirect causal pathway leading from individual emissions to the harms caused. Because of the fact that we are dealing with a 'large-scale intergenerational collective action problem', of course we will not be able to see the direct harm of one individual on another (Fragnière 2016, 799). This does not take away the fact that there are harms produced, and these harms are definitely not small or negligible. As I said in 2.2, I agree with Gianfranco Pellegrino that: '*Contribution is causation*: Being part of cause is being a cause. Contributing to causal factors amounts to causing. Contributions are proper causes' (Pellegrino 2018, 4). We can only see the causal relationship between global or annual GHG-emissions and the climate harms that occur. The fact remains that we cannot prove a direct causal pathway between individual emissions and climate harms, which means that this reason for ICI holds for now. So let us take a look at the last reason given for ICI: The claim that individual actions do not make a difference.

2.4: No Difference

The last reason for individual causal inefficacy is the argument that the same amount of GHGs will be emitted anyway, whether I contribute to it or not (Jamieson 2014; Kingston & Sinnott-Armstrong 2018; Lawford-Smith 2016a). Only when the concentration of GHGs in the atmosphere actually makes a difference can we say that an individual causally affects the climate: '[T]he concentration must make a difference to the kind and degree of harm to persons experienced as a result of climate change' (Lawford-Smith 2016a, 67). For this to be true, it has to be the case that when the concentration is higher, the harms get worse. This is hard to calculate, as global warming is hard to measure due to the global temperature system which is not reliable and constant.

One way to counter the no difference claim, is to look at the difference our contribution might make, instead of what it actually makes. For instance, if I buy a flight ticket, this will

lead to an increase of flight demand. By increasing the demand, more planes are likely to depart in order to accommodate all travelers, which increases the air travel overall. The more air travel there is, the larger the GHG-emissions will be. Because buying a flight ticket can have the effect of more airplanes flying, one should refrain from flying. In a lot of cases, there will not be an increase in air travel when someone buys a ticket. However, there is still a possibility that one contributes and therefore has the duty not to fly. This is dubbed the 'low probability expectation of major difference' by Lawford-Smith (Lawford-Smith 2016a, 69).

One of the problems with this argument, of course, is that we do not know whether or not our actions make the difference by crossing a threshold. However, there is a chance that we might make a major difference. Let us say a flight can take 1000 passengers. The only person that makes a real difference, is the 1001th passenger that books the flight. If, on the other hand, we use the threshold contribution principle, another plane will have to fly if there are 1001 customers that buy a ticket, rather than 1000. Each of the 1001 customers are in this case contributing to the second plane flying, rather than only the 1001th customer. Each individual action then makes a difference, because it is an indistinguishable part of the whole (Lawford-Smith 2016a, 70-1).

Of course, it can then be argued again that when there have already been 1001 customers to buy a ticket, it does not matter any more because there will already be two flights departing anyway. This leads us back to the overdetermination cases discussed above (see 2.2). An interesting way to get around the problem of overdetermination is by following the argument made by Martin Bunzl, who argues that overdetermination does not exist. Causation can be either sequential or synchronic (Bunzl 1979). In the case of sequential causation, there can be a case of overdetermination and pre-emption as people do not know whether or not they are the ones crossing the threshold that causes the harm. If we look at synchronic causation, however, people all act at the same time. This leads to all the actors being part of the cause of the harm. Overdetermination often consists of an effect taking place, whether or not one contributes to the cause. Bunzl argues, however, that causes should not be considered sequentially, but rather as synchronically performed. If we treat each case of overdetermination in a way that the causes are performed synchronically, all actors involved become complicit and thereby responsible for the effect that takes place, rather than the last person that crosses the threshold and thereby triggers the effect caused. By using synchronic causation for overdetermination cases, all causal factors start playing a partial role. Individual causes are thereby no longer inefficacious, as no preemption takes place. We do no longer know who was the person that triggered the threshold,

as each and every actor that took part in the act is made complicit in triggering the threshold (Bunzl 1979).

Let us apply this to the flight-problem above. If the flight tickets are bought sequentially, then the proponents of the no-difference claim would say that the same harm would be brought about. Whether or not an individual abstains from buying a ticket, the threshold will be reached anyway. If the flight tickets are bought synchronically, then all the individuals help bring about the harm. As soon as any person does in fact buy a flight ticket, this makes her complicit in triggering the next threshold (Lawford-Smith 2016a, 71-2). We can now conclude that the overdetermination and no-difference claims do not hold for our current debate as they are not applicable to the problem of AGCC.

2.5: Conclusion

Four claims in support of ICI have been examined, of which three have been refuted. The only reason for ICI that appears to hold up under scrutiny is P2.3, because we cannot yet prove a direct causal pathway between individual GHG-emitting acts and the harmful consequences these might have. The insignificance claim (P.2.1), the threshold claim (P2.2) and the no difference claim (P2.4) in support of ICI (P2), all fail when applied to luxury emissions. As most of the arguments in favor of ICI fail, we cannot use ICI as a defense for luxury emissions such as an individual joyride. Luxury emissions indirectly contribute to AGCC and its harmful effects.

We should not have to outweigh every single action, but we should reflect upon the effects of our actions and see if we can reasonably find an alternative that is less damaging to the environment. Our individual actions can still have very helpful or damaging effects on the climate, perhaps not directly, but definitely indirectly. We have to look at the expected harmful effects of actions, rather than the immediate harmful effects of our actions (Hiller 2011a, 366). Once we stop viewing AGCC as only a collective action problem and take individual responsibility for our actions, this can lead to certain positive outcomes. The more people become aware of the impacts of their actions, the more people will change their practices in order to reach more positive outcomes. Besides, individuals can be inspired to change their behavior by certain campaigns and practices. The more individuals that act responsibly, the more this will lead to an increase in political will to change policies (Hiller 2011a).

Now that we have inspected some of the reasons in favor of ICI such as the indirectness of causality, as well as some of the arguments against ICI such as the significance of emissions and the overdetermination claim, we can see that while individual emissions might not be

sufficient or necessary to cause global warming on their own, they are in fact contributing factors to the problem. Now that we have tackled the ICI claim, we will move on to the third and final part of Sinnott-Armstrong's argument. Namely, the need for a general moral principle that proves that individuals have a moral obligation to refrain from luxury GHG-emissions (P3). As Sinnott-Armstrong provides several general moral principles which he then refutes, I will consider whether or not there are still (other) general moral principles (hereafter GMPs) that hold.

Chapter 3: General Moral Principles and Individual Obligations

In the introduction, I have said that my argument against Sinnott-Armstrong would be twofold: First to show that ICI does not apply to AGCC, and then to show that there are GMPs or other reasons for individuals to reduce their luxury emissions in order to reduce the severity of AGCC. Now that we have discussed the ICI argument in detail, we can move on to the second part of the argument against Sinnott-Armstrong.

According to Sinnott-Armstrong there is no general moral principle that proves that individuals have a moral obligation not to drive a gas-guzzler for fun (P3). This amounts to saying that individuals have no moral obligations to refrain from luxury-emissions. Ewan Kingston and Sinnott-Armstrong argue that there is no moral requirement to abstain from emitting 'reasonable amounts of greenhouse gases (GHGs) solely in order to enjoy oneself' (Kingston & Sinnott-Armstrong 2018, 169). It remains questionable what exactly reasonable amounts of GHGs are. To keep our scope limited, we will keep on using the example of joy guzzling. Driving a gas-guzzler for fun is considered to be one of the instances of emitting a reasonable amount of GHGs, according to Kingston and Sinnott-Armstrong. Whereas driving a car might not necessarily emit unreasonable amounts of GHGs, there is an important difference between driving a car out of necessity to get to work and driving a gas-guzzler for fun on a Sunday.

Kingston and Sinnott-Armstrong admit that it might be morally better and even virtuous to refrain from driving a gas-guzzler for fun. However, it does not mean that this also entails a moral requirement to refrain from wasteful driving. I will first discuss some of the general moral principles provided by Sinnott-Armstrong in his earlier paper, as well as some other principles provided by Kingston & Sinnott-Armstrong in the later paper. This thesis will argue that there are individual reasons to reduce GHG-emissions, even if the provided general moral principles do not always apply.

Even though most authors agree that we have some duty to reduce our carbon footprint, almost nobody would go so far as saying we should cease to emit GHGs entirely (Hiller 2011a; Hourdequin 2010; Lawford-Smith 2016a; Nolt 2011; Shue 1993). The two most common reasons to limit the extent of individual duties are demandingness and control. When considering the demandingness objection, we would lose life prospects if we would have to reduce our GHG-emissions to zero (Fragnière 2016). As some sacrifices are too great, we try to mitigate the burden on individual climate duties. Therefore, we should give up on certain luxury emissions, but not on subsistence emissions (Shue 1993). When considering control, we

can see that there is a limit to the control we have over our own carbon footprint and the individual duties that we impose on ourselves. We cannot be held responsible for outcomes that are not under our individual control.

Let me give a quick summary of some of the provided general moral principles.

- The Harm Principle: We have a moral obligation not to cause harm to others (Sinnott-Armstrong 2005, 297).
- The Indirect Harm Principle: We have a moral obligation not to cause harm to others indirectly; if somebody were to cause harm because of his or her individual actions, this would be an example of indirect harm (Sinnott-Armstrong 2005, 299-300).
- The Contribution Principle: 'We have a moral obligation not to make problems worse' (Sinnott-Armstrong 2005, 300).
- Internal Principles: There are certain virtues and vices that dictate us to refrain from expelling greenhouse gases.

We will go over these principles in the following sections, but first we must take one step back to see why Sinnott-Armstrong argues that there is no consequentialist pay-off from reducing one's GHG-emissions. By incorporating some of the claims from the previous chapter to the existing GMPs, while abstaining from the direct causality of ICI, new GMPs will be created that hold and thereby oblige the individual to refrain from luxury emissions.

3.1: Consequentialist Pay-off

Johnson argues on a similar note as Sinnott-Armstrong that individuals have no unilateral ethical obligations for climate harms (Johnson 2003). Johnson however, uses the framework of a tragedy of the commons to substantiate his claims and tries to show why unilateral action does not make a positive contribution to global warming. A tragedy of the commons can be described as the use of a common resource by many that leads to the resource being depleted; one good example of this is fossil fuels. The basic idea behind a tragedy of the commons is that people are irrational when they cooperate to achieve the overall best outcome without a guarantee that others will do so as well. People want to maximize their personal benefit, and according to Johnson, have no moral obligation not to do so. An individual gains no advantage by abstaining from use of the commons, and only maximizes personal benefit by using the commons as much as possible. If unilateral restraint does not achieve its purpose of averting the tragedy of commons, there is no moral reason to restrain oneself from using the commons.

If we apply this on the use of GHGs, Johnson argues that only the aggregate use of the commons can cause harm, not the individual act of emitting GHGs: 'individual acts are harmless in themselves' (Johnson 2003, 273). But even if there is no direct consequentialist payoff by abstaining from burning fossil fuels, there are still plenty of reasons to reduce one's GHG-emissions.[9] Some of these reasons will be discussed in this chapter.

One objection to Johnson's argument is that people should do the right thing, no matter what others do (Hourdequin 2011). Practices such as slavery or killing are immoral, and should therefore not be practiced, even if others do it. Johnson's argument against this is twofold: without assurances that others will restrain themselves from using the commons, most users will not refrain from using the commons (Johnson 2003, 277). Besides, one individual's use of the commons is not harmful, but every act of murder is. Individual restraint from the commons will not prevent the harm, thus there is no moral obligation to unilateral restraint according to Johnson. Therefore, he calls for a collective scheme whereby people are assured of other users' restraints as well to prevent the aggregate harm from occurring. Our primary obligation should therefore be to develop collective agreements to change aggregate behavior. This is another example of a top-down argument which is very similar to Sinnott-Armstrong's conclusions.

As can be seen by inspecting the claims made by both Johnson and Sinnott-Armstrong, the reason for not keeping individuals responsible for their personal GHG-emissions is based on the fact that we cannot see the immediate effect of our GHG-emissions on climate change. It is only by aggregate use of the commons and the aggregate GHG-emissions that harms tend to occur. There is no direct consequentialist payoff that assures us to have a positive influence on climate change when we refrain from GHG-emissions or reducing our individual carbon footprint, therefore, we are not morally obliged to refrain from luxury emissions. This consequentialist view is closely tied together with the direct- and indirect harm principle which will be discussed in the following section.

3.2: The Harm Principle

This widely accepted principle holds that individuals are morally required not to harm others. When applied to AGCC this implies that when GHGs cause harm to others, one should not emit GHGs. The harm principle is said not to hold, because an individual act is often not necessary or sufficient to cause global warming. It is only when many people participate and act in the same manner, that it will make an actual difference and thus cause harm.

[9] See Marion Hourdequin (2011) for more on consequentialism.

3.2.1: The Direct Harm Principle

The reason that joy-guzzling is not seen as causing a harm, is that it does not contribute directly to global warming and therefore it does not cause harm to others.[10] Because it is not an unusual act and does not causally harm anyone, it is not blameworthy (Sinnott-Armstrong 2005, 298-9). By depriving oneself from the joyride, one does not help another.

Let me elaborate on this, for it is one of the flaws in Sinnott-Armstrong's argument. According to Sinnott-Armstrong, only when an act is unusual and the intention is harmful, can it be considered to be the cause of harm (Sinnott-Armstrong 2005, 300). Under usual circumstances, an event will occur anyway and therefore, it cannot be considered to be a blameworthy act. Perhaps another example given by Sinnott-Armstrong will make this point clearer. When we light a match, we do not consider the cause of the fire to be oxygen which is in fact a necessary element to start the fire. Instead, the friction that lights the match is considered to be the unusual cause of the fire, as oxygen is omnipresent (Sinnott-Armstrong 2005, 298). As many people drive a car thoughtlessly every single day, the emissions from an individual joy-guzzle are not considered to be unusual by Sinnott-Armstrong. Blaming people for a harm while most agents act in the same manner is seen to be counterproductive.

Instead, we should only condemn those that actually act in in unusual ways which cause harm, we should '[…] reserve our condemnation for those who are well below average' (Sinnott-Armstrong 2005, 298). Sinnott-Armstrong agrees that there are acts that are both usual and harmful, but then the harm inflicted is due to the harmful intention of the actor rather than the usualness of the act. There are a great many practices in everyday life that are harmful even though they are usual and are not committed with the intention to harm. Most notably are the instances of long-standing convictions and practices within cultures that are both usual and harmful, e.g. racial or sexual discrimination. Even if we accept that these practices are not intended to harm anyone in specific, we can still agree that they are in fact harmful in general. It seems then, that such acts can be both usual and harmful, even though there is no harmful intention. Now, let us apply this on the issue at hand: driving a gas-guzzler for fun.

If an act can be considered the cause of a harm if it is usual, then why could we not condemn someone for driving a gas-guzzler? It seems to me that this falls into the category of usual acts, even though there is no need for someone to do this. It is not a subsistence emission, but rather a luxury emission. There are many reasonable alternatives available to the person to

[10] I have already discussed this thoroughly in chapter 2, and will therefore only elaborate on the unusualness argument given by Sinnott-Armstrong.

enjoy himself, rather than joy-guzzling. The individual emission does not necessarily cause the harm, but cumulative emissions do. We cannot always refrain completely from emitting GHGs, but individuals should try to minimize harm if and when they can. The case of joy-guzzling seems like a perfect example of something that is easy to abstain from. Even if we agree that certain luxury emissions are not necessarily harmful and therefore wrong on their own, we can still maintain that there are reasons to abstain from luxury emissions because they decrease the chances of inflicting future-harms.

3.2.2: The Indirect Harm Principle

Due to the fact that AGCC is a global and intergenerational phenomenon, we cannot look at causation of harm in the simple individual-to-individual way. The harms are caused by indirect effects over a longer period of time. The indirect harm principle dictates that we have a moral obligation to refrain from acting in such a way that it promotes others to do harm. The easiest example of this is setting a bad example for others. Even though I might not cause any harm by myself, my actions can still lead to others following a bad example which increases the chance of harm.

The problem of the indirect harm principle is considered to be the same as for direct harms when it comes to AGCC: the scale of climate change is too big for any individual to cause it. Besides, according to Sinnott-Armstrong, we do not influence others as much as one would think. It would be unlikely for others to follow the bad example of me driving a gas-guzzler on Sunday. Both the direct and the indirect harm principle fail, according to Sinnott-Armstrong, because the harm is not necessary or sufficient; the harm makes no difference. I agree that the problem of difference-making is hard to refute, as we cannot say for certain whether one GHG-emitting activity actually makes a difference to the degree of harm done. I would argue however, that difference-making is probabilistic rather than factual. Besides, harms can be brought about by a single actor, or by multiple actors. When the actions of an individual are taken together with the GHG-emitting actions of others, this can also produce a harm which is a lot easier to perceive (Lawford-Smith 2016b, 135). As has been stated before, we should not look at GHG-emitting acts in isolation, but rather as acts that are part of sets of acts.

The indirect harm principle can still be used if we allow for indirect harm to be caused by multiple actors. If we allow the indirect harm principle to be caused by multiple actors, we create a new principle: the contributory indirect harm principle. This principle can be applied to expected or future harms, for which individual actors can then be held responsible.

3.3: The Threshold-Contribution Principle

According to Sinnott-Armstrong, the contribution principle should be considered as the moral obligation not to make matters worse. Only if climate change becomes worse by an individual act, will this principle apply. As climate change does not become worse because of the individual gas-guzzling fun of driving an SUV, this principle is said not to hold (Sinnott-Armstrong 2005, 301).

First of all, by saying that climate change does not become worse, he reduces the contribution principle to the direct harm principle. As global warming occurs on a scale beyond comprehension, the individual drive would once again make no difference. It seems much more plausible to refrain from certain luxury emissions, even if it is uncertain what the effects of the emissions will be in the future. Sinnott-Armstrong on the other hand, makes the very implausible claim which states that as long as there is no visible effect, one is not contributing to the problem at all. As we have already refuted ICI for AGCC in the former chapter, we can safely say that there actually is a significant contribution. We can simply not tell yet which harm, and how much harm actually results from this contribution. Besides, we should not forget that climate harms do not affect individuals, but affect whole populations and even continents. In other words: '[Together] the expected disvalue of these large-scale and small-scale impacts is greater than the expected value of at least some luxury emissions to the emitters' (Morgan-Knapp & Goodman 2015, 188-9).

Let us say, for the sake of the argument, that we do in fact not (directly) make problems worse by the individual act of gas-guzzling. Even if this is so, there is something to be said for a different approach formulated by Ben Almassi: the threshold-contribution principle (Almassi 2012). Almassi articulates a probabilistic approach to the threshold issue that applies to gas-guzzler activities as well as other luxury GHG-emission activities.

In chapter 2, we have already discussed the notion of climatic thresholds that can be reached and crossed when we examine AGCC. There are both micro- and macro-level thresholds. Let me summarize the main points of such thresholds once again. Some of the micro-level thresholds have to do with the increase of demand. The more people want to go on holiday to far-away destinations, the more tickets will be sold for flights, hence more planes will have to fly. Once one airplane is full, the person that crosses the next threshold will ensure that an extra plane will have to fly. If there is a decrease in demand, less planes will have to fly in order to supply the demand. This contributes to a decrease in GHG-emissions. When considering macro-level thresholds, we are considering the grand-scale thresholds. Such

thresholds can be the melting of ice sheets leading to a rise of the sea level or global warming leading to droughts which in turn leads to the death of trees which reduces the earth's absorptive carbon dioxide capacities. The more micro-level thresholds are crossed, the bigger the chances are of crossing macro-level thresholds which will induce irreversible global climate changes. The micro- and macro-level thresholds are interrelated.

The negative formulation of the threshold-contribution principle, dictates that we have the obligation to refrain from acting in such a way that it could contribute to reaching any significant negative threshold. Individual actions can contribute to crossing environmental thresholds, even if the action itself does not directly make problems worse. Especially if we add the premise of synchronic causation, one cannot hide behind the defense of overdetermination (Bunzl 1979). As I have explained in the last section, crossing climatic thresholds does not necessarily have a negative effect when it is a micro-threshold; however, the more micro-thresholds are crossed, the bigger the chances are of crossing a macro-threshold. Crossing a macro-threshold does not harm one individual, but harms whole populations of people. By contributing to the crossing of thresholds, you can in fact be held responsible, and are therefore obligated to refrain from doing so.

The positive formulation of the threshold-contribution principle, dictates that when we have the option available to choose for an act that contributes to reaching a positive threshold, we should do so. In any case, even if we do not know whether or not it will contribute to reaching a positive threshold, we can often reasonably expect that certain actions at least do not contribute to reaching a negative threshold (Almassi 2012, 13). If this is the case, then we can speak of a probabilistic approach to such threshold issues: 'The basic idea, then, is that the individual act in question should be performed just in case, and all other things being equal, […] that is, when the probability the threshold is reached is increased given the performance of the act' (Almassi 2012, 12). By refraining from, or promoting, certain individual acts, we can make it more likely that a given threshold is (not) reached.

There is one catch however, as the threshold-contribution principle also dictates that we should act in the right manner, if, and only if, 'all other things being equal and given the evidence available to the actor' (Almassi 2012, 13). This leaves open a wide array of escapes from this moral principle, for in most cases, not all other things remain equal when we choose for one course of action over another.

Even so, the threshold-contribution principle is a general moral principle for individuals to use as a moral guide for their actions when concerned with the environment. First of all, (almost) everybody knows that gas-guzzling emits carbon dioxide, which contributes to other

GHG-emitting activities around the globe, likely to cross a climatic threshold at some point. There is not a problem of missing evidence.[11] Neither does one limit himself by choosing for the course of action that refrains from gas-guzzling as it is a luxury emission that is solely focused on obtaining an indeterminable degree of fun. Therefore, by refraining from gas-guzzling, one decreases the chance of contributing to crossing a negative environmental or moral threshold. At the same time, refraining from gas-guzzling, one increases the chance of contributing to crossing a positive environmental threshold. In other words: 'By taking a gas-guzzling Sunday drive, Walter will be increasing the rational subjective probability that one or more climatologically negative threshold(s) will be crossed' (Almassi 2012, 16).

3.4: Emergence and Timing Objection

Perhaps all of these principles described above are cases of partial causation or expected disvalue approaches, in which case Kingston and Sinnott-Armstrong raise the objections of emergence and timing (Kingston & Sinnott-Armstrong 2018, 174-180). The emergence objection is used against the notion of aggregative harmfulness and holds that we cannot judge the harm of a part by simply dividing a total by the sum of the parts. One particular part is not sufficient to create a harm, as it does not possess the necessary qualities to produce the harm. In the case of GHG-emissions, a single gas-guzzling action does not possess the emergent properties that are caused when the parts are combined. Only when the single GHG-emissions are taken together, does the emergent property of harm become apparent. In other words: 'Emergent properties of the whole are not properties of the parts' (Kingston & Sinnott-Armstrong 2018, 175). The GHG-emissions start having dangerous impacts when they consist of larger groups of molecules of GHGs. As a single GHG-emission does not have the emergent properties to cause the harm, it is claimed that a single GHG-emission is not enough to hold someone responsible for any occurring (future) harm. However, even individual GHG-emissions do add to the sum of the parts, thereby increasing the likelihood to cause harm. Even if small contributions of GHG-emissions do not have an immediate effect on the increase of the CO2 concentration in the atmosphere, it does not hold that the small emissions have no effect at all.[12]

[11] The only problem remains that people do not understand how a fun-ride can influence the bigger picture of AGCC.

[12] This argument leads us back to the same mistakes we make in moral mathematics mentioned in chapter 2.1 (Parfit, 1984).

The timing objection tells us that even if one does not emit an amount of 14kg of CO2 by refraining from an individual joy guzzle, a fraction of a second later the same amount of CO2 would still be in the atmosphere as we emit CO2 over the entire world collectively rather than individually. This amounts to saying that it does not matter when it happens, as it will happen anyway. This is clearly false, especially in the case of GHG-emissions and CO2 concentrations in the atmosphere. Even if it is true that a fraction of a second later the same amount of CO2 would still be in the atmosphere, it does not follow that the amount of CO2 expelled is insignificant. As the earth can only absorb only so much of our expelled CO2, we should try and reduce our GHG-emissions to a minimum, as to reduce the overshooting to a minimum. Especially in the case of global warming, it does matter when and if GHGs are emitted. If everybody would refrain from joy-guzzling, it might be true that the same amount of CO2 will eventually end up in the atmosphere, but the timing does seem to matter a great deal. The longer it takes to reach the same amount of CO2 in the atmosphere, the more time there is to find a different solution to the problem of AGCC. Besides, when we delay the catastrophic amounts of GHGs in the atmosphere, millions of people will be able to live longer.

3.5: Internal Principles and Communicative Value

One last option to create GMPs has not yet been explored in this thesis: internal principles. These principles are non-consequentialist, and therefore do not require harm for wrongdoing. Let us look at one internal principle that is the most striking example which is said not to hold: virtues. The virtue principle states that: 'We have a moral obligation not to perform an act that expresses a vice or is contrary to virtue' (Sinnott-Armstrong 2005, 303).

A moral requirement violated implies doing something morally wrong and thus one becomes liable to a certain negative sanction that might accompany that violation (Kingston & Sinnott-Armstrong 2018, 170). There are also rewards for acting morally: someone who gives to a certain charity might deserve praise, whereas someone who does not steal or kill does not necessarily deserve praise. The person who does not give to charity however, does not necessarily deserve condemnation. There is no moral requirement that obligates us to give to a certain charity. The point is that not all acts that are considered to be good or bad deserve praise or condemnation, as they do not violate a moral requirement. I agree to an extent with Kingston & Sinnott-Armstrong who state that even if it is virtuous not to joy guzzle, this does not mean that it is morally required: '[V]irtues are not moral requirements' (Kingston & Sinnott-Armstrong 2018, 170). As long as it is not a moral requirement to refrain from doing something, an agent is free to do it.

On the other hand, Hourdequin does make a fair point in advising that it is hypocritical for green activists to joy guzzle while advocating against climate change (Hourdequin 2010). She uses a different internal principle which is not discussed by Sinnott-Armstrong, namely, the ideal of integrity. It seems inconsistent to try and reduce GHG-emissions on a collective level, but at the same time not reducing one's own emissions. Integrity can help an individual to overcome conflicts that arise out of the different commitments one has (Hourdequin 2010, 448-9). By using integrity as an ideal to live up to, one can overcome the discrepancy between the personal and political action undertaken against global warming. Even though I strongly agree with Hourdequin on this point, I have to admit that it does not seem to violate any moral requirement when we do not have integrity as an ideal to live up to. It seems that no general moral principle can be grounded on the ideal of integrity alone. However, even if integrity does not give us a general moral principle, it still gives us reasons to live up to ideals that we hold dear.

We can also take a look at the internal principle of consistency as provided by Garvey (2011). Consistency and morality are very closely tied together. If you condemn one person for doing something, you will have to be consistent and condemn the next person who performs the same action as well. If you believe that 'In short, the biggest polluters have the biggest obligation to take meaningful action on climate change' (Garvey 2011, 170), then due to the consistency claim, you will have to take meaningful action on climate change as well. If it goes for the biggest polluters, it will go for you and I as well. When we consider the US to be wrong for not dealing with pollution problems, we will also have to consider ourselves wrong for not acting on climate change problems (Garvey 2011, 171). In the west we usually emit between 10 and 20 metric tons of carbon dioxide per capita, while the average is 5, and in many countries it is even less than 1. So we do about 10 to 20 times as much damage as others around the world. The beauty of this argument is that even if you believe that it makes no difference what you do, consistency still requires you to go green: 'You have to do the green thing, even if doing so makes no difference at all' (Garvey 2011, 172). The principle of consistency cannot form a general moral principle however. It is once again only an ideal that people can try and live up to if they consider it important to be consistent in their actions.

Lastly, let us look into the communicative value of unilateral reductions of GHG-emissions. Johnson argues that unilateral reductions in isolation do not provide reasons for others to act in the same manner, and thus they do almost nothing to fight climate change (Hourdequin 2011, 159; Johnson 2003). He points out that we are only inclined to make sacrifices if we think others will do the same. But this is not necessarily true, as people have

intrinsic motivations as well, and do believe that their actions can help others to adjust their behavior. Hourdequin argues that individual actions have a lot of communicative potential to mitigate climate change: '[T]he distinction between individual reductions and individual action to generate collective schemes is not sharp, and *individual emissions reductions can themselves contribute to the generation and stabilization of effective collective schemes*' (Hourdequin 2011, 162, original italics). Acts can have communicative value, as acts have different social meanings. Going to work by bicycle rather than driving to work has different social meanings. One could think that a person does this because of health-reasons; because it is a faster way of transport in a busy city, or perhaps because of a personal reduction in GHG-emissions. In any case, at least one of the social meanings of this act shows concern for AGCC. Even though unilateral reductions of GHG-emissions do have a communicative value to others, it does not create a general moral principle that everybody is obliged to adopt.

By changing ones' norms, one can change behavior and lifestyles. If several individuals represent a green lifestyle as something enjoyable and mainstream, rather than expensive and restricting, this can have an amplifying effect on others. While it is indeed hard to empirically prove that individual actions actually have a big communicative power and value, it is far from certain that it has no effect at all. All who read this have probably at one time or another followed the example set by friends concerning our personal carbon footprint. Whether this is done by offsetting flights, eating less meat, or using public transport rather than a car, does not matter. We are influenced by the ones that we respect, especially by the ones close to us. But not only the ones in our inner circle can have this influence on our behavior; public figures can have this influence as well as they can promote certain lifestyles and encourage others to adopt this lifestyle too.

3.6: Conclusion

Sinnott-Armstrong believes none of his act principles mentioned above are strong enough for a moral obligation to refrain from gas-guzzling. This chapter has shown, however, that because ICI fails on most accounts, we can create other general moral principles such as the contributory indirect harm principle for expected harm, and the threshold-contribution principle. These new GMPs oblige individuals to refrain from luxury emissions because individuals do contribute to the harm AGCC causes. The non-consequentialist internal principles that have been discussed in the previous section can create moral guidelines for people, but do not create general moral principles for everybody to adopt.

Conclusion

What happens if the expected value of a joy-guzzle outweighs the expected disvalue of the joy-guzzling? This can be the case for instance if the joy-guzzle actually promotes self-determination of an agent, and therefore abstaining from joy-guzzling would lead to much more expected harm to the individual agent. However, if we weigh the two considerations: self-determination and the expected harm upon many individuals, one could still maintain that it is morally wrong to joy-guzzle. Besides, deriving self-determination and self-worth from joy-guzzling seems rather foolish in the first place: 'In pursuing our own perceived self-interest, the rich are doing terrible harm to other people and to the natural systems on which humanity's future depends' (Morgan-Knapp & Goodman 2015, 190). Even if we maintain that collective action is the best way to reduce global GHG-emissions, we can still have individual obligations to reduce our personal carbon footprint to prevent harming others. Luxury emissions are wrong, as the expected value of harming someone is high, compared to the small contribution one of such a luxury emission makes to our individual lives: 'A far better act-consequentialist analysis of evidence-relative wrongness holds that an action is wrong just in case there is an available action whose outcome has a better expected value' (Morgan-Knapp & Goodman 2015, 180). There are enough alternative choices available to us, to improve both our own lives, as well as reduce the expected disvalue of the action upon climate change.

Can we now say that an individual in fact has a moral responsibility to bear for contributing to AGCC by luxury emissions? Let me recapitulate the former chapters before reaching a conclusion. We started off in the first chapter by looking into the Obligation Derivation, which holds that individual moral obligations do not follow directly from collective moral obligations. Both individuals and collectives can have agency, and can therefore be held morally responsible when they neglect to fulfil their respective obligations. Collectives as well as individuals can face normative significant actions to choose from and have a judgmental capacity to judge its significance. However, there are differences between individual and collective responsibilities when it comes to climate change. When concerned with AGCC, collectives have a much greater influence to mitigate GHG-emissions, whereas individuals can only do so much to reduce their personal carbon footprint or promote collective action against the problem. I think it is safe to say that individual moral obligations cannot be directly derived from collective moral obligations. Even though the first premise holds, there are still other reasons for an individual to be morally responsible for his or her luxury emissions.

It is hard to ascribe a backward-looking responsibility to individual agents for ACGG, because it is difficult to see what the effects of individual emissions are on the collective action problem. I have argued, however, that while the causality of one's personal contribution to the bigger problem might be hard to assert, we can still look at a different form of responsibility that one might carry: forward-looking responsibility. This entails that when we are faced with choices of normative significance, we can have the forward-looking responsibility to choose the option that has the least chance of harming others; if, and only if, there are reasonable alternatives to choose from. While there might be no consequentialist pay-off, it can still be morally required of an individual to choose a course of action that produces the least amount of harm overall.

In the second chapter we have discussed the problem of individual causal inefficacy which holds that individual actions are of little importance when faced with AGCC; in fact, individual actions are considered to play no causal role in the reduction of GHG-emissions overall. Individual actions are considered to be causally inefficacious because they are not necessary or significant for the produced harm. The four most common reasons for ICI that we have considered were:

- P2.1: Insignificance of Individual Emissions
- P2.2: Climatic Thresholds
- P2.3: No Direct Causal Pathway
- P2.4: The No Difference Claim

The insignificance argument was refuted because even though individual emissions might be very small and perhaps have imperceptible effects, sets of acts rather than isolated actions lead to a moral significance of individual acts. Imperceptibility of the effect does not imply insignificance or nonexistence of the effect.

The climatic threshold argument does not hold either, as individual emissions have the chance of reaching a micro- or macro-threshold. When an individual emission does not cross the climatic threshold on its own, it still contributes to the cause of crossing such a threshold. Overdetermining causes are still proper causes due to the threshold contribution principle.

The third argument of no direct causal pathway does apply. Because AGCC is a large-scale intergenerational problem, there are a great many causes to be considered that contribute to the harm that occurs in the future. Not each contribution to the problem can be identified in isolation, and therefore it is hard to prove the individual causal efficacy. Even if we follow the lines of argument given by Hiller and Nolt, we can only give an estimate of a contribution to a

future harm, but we cannot prove the exact amount of harm that occurs in the future due to any given individual luxury emission. All we can say is that there is an indirect contribution to causation, even if we cannot prove the direct link between cause and harm.

The last given reason states that it does not matter whether or not I contribute to climate change by my individual luxury emission. According to this view, it simply makes no difference, as the same amounts of GHGs will be emitted into the atmosphere a split second later anyway. The no difference claim does not hold, as the higher the concentration of GHGs in the atmosphere gets, the worse the harms become due to climatic thresholds. Global warming and climate change do not stop after reaching a certain threshold. Synchronic causation rather than sequential causation leads to responsibility for individual actions and caused harms.

We should therefore not be concerned with individual causal inefficacy, but instead with individual expected difference-making and expected marginal future harms. Even if we cannot see the direct effects, we can still reflect on the possible effects of our actions and find reasonable alternatives if possible. Our focus should be on expected harmful effects of individual actions rather than direct causal efficacy of individual actions.

The last chapter has been concerned with finding a suitable general moral principle to prove that individuals have a moral obligation to refrain from luxury emissions. The first of these moral principles was the harm principle: one is morally required not to harm others. While Sinnott-Armstrong argues that an individual luxury emission is neither necessary nor sufficient to cause harm, I have argued that while the act in isolation does not necessarily cause harm, the cumulative of emissions in fact does cause harm. Joy-guzzling is a perfect example of a luxury emission that is easy to abstain from, by which we in fact minimize harm. The second principle we have considered was the indirect harm principle: one has the obligation to refrain from actions that promote others to do harm. While most luxury emissions perhaps do not promote others to do harm, I have argued that when an indirect harm is caused by multiple actors, it can form a contributory indirect harm principle which can be used for expected harm, rather than current harm. The direct harm principle does hold, as we cannot see the direct harm of our individual actions in this case. However, minimizing the expected harm can still apply. The indirect harm principle holds as long as multiple actors can contribute to the expected harm.

The contribution and threshold-contribution principles have already been discussed in chapter 2. The most important part of these principles is that while the individual-to-individual causation of harm might be hard to prove in the case of AGCC, we can very easily perceive and prove the contribution of GHG-emissions to global warming. Every person on the planet contributes to reaching a climatic threshold that affects climate change. Whereas some GHG-

emissions are necessary for subsistence, others, such as luxury emissions, are not. Luxury emissions are not necessary for subsistence, and can most often be easily replaced by choosing a different action. Many acts that do not involve GHG-emissions, and do not contribute to reaching a climatic threshold, can achieve the same amount of joy that is derived from a luxury emission such as joy-guzzling. The threshold-contribution principle holds as we do have an obligation not to make matters worse, and we do in fact make matters worse by individual luxury emissions as has been shown empirically as well. The threshold-contribution principle of Almassi is the best general moral principle that we have encountered. It holds no matter what. The timing and emergence objections of Kingston & Sinnott-Armstrong are not enough to disqualify it.

Lastly we have discussed internal principles and communicative value of unilateral restraint on GHG-emissions. Internal principles such as integrity are very interesting but do not imply a general moral principle that holds for every individual. While consistency can require us personally to act consistently, it does not impose a general moral principle that every person will concede to. Communicative value of unilateral restraint is important for many people, but also gives no general moral principle.

Chapter 3 shows that there are certain general moral principles that can hold. Even if there is no direct consequentialist pay-off, there are still reasons to reduce individual GHG-emissions, especially luxury emissions. 'A far better act-consequentialist analysis of evidence-relative wrongness holds that an action is wrong just in case there is an available action whose outcome has a better expected value' (Morgan-Knapp & Goodman 2015, 180). This makes luxury emissions wrong, as the expected value of harming someone is high, compared to the small contribution which such a luxury emission makes to our individual lives. There are enough alternative choices available to us, to improve both our own lives, as well as reduce the expected disvalue of the action upon climate change. Even though there is sometimes no intentionality to do harm, there is most definitely foreseeability of future harms. Therefore, we can ascribe moral responsibility to individuals.

To sum up: In chapter 1 we have examined the Obligation Derivation, to find that individual moral obligations can indeed not always be directly derived from collective moral obligations. However, an individual can still be responsible for a collective problem. In chapter 2 we have partly refuted ICI as there is harm from luxury emissions. It is simply not yet determinable how much harm individual luxury emissions create. In the last chapter we have examined whether or not there are GMPs that prove individuals have a moral obligation to refrain from luxury emissions. As it turns out, there are new GMPs that can be made to hold,

by incorporating the refuted arguments made in favor of ICI. We can reach the conclusion that an individual joyride in a gas-guzzler does cause harm, and, therefore, individuals have the moral obligation to refrain from such luxury emissions. Individuals should reduce their carbon footprint as it contributes to AGCC and thereby causes harm. Besides, one should still promote collective action to reduce GHG-emissions in general and reduce the negative effects of AGCC.

The claim that individual joy-guzzling does not influence climate harms is refuted. Even though the climate is very unpredictable and unstable, experiments have shown that even a very small increase in CO2 concentrations can lead to catastrophic effects due to the threshold-contribution principle. This insight might lead to paralysis as Johnson and Sinnott-Armstrong would argue, but this need not be. We can simply consider for ourselves what the expected value of a certain luxury emission is on our daily lives, compared to the expected disvalue a luxury emission has on climate change. In this way, we can use the threshold-contribution principle to argue that the joy derived from a joy-guzzle does not outweigh the damage it does to climate change. Refraining from a joy-guzzle thus morally outweighs the joy derived from such a luxury emission. Even act-consequentialists such as Sinnott-Armstrong will have to concede that it is then morally wrong to go for a fun drive. It is therefore morally required for a person to abstain from luxury emissions as long as there are reasonable alternatives to choose from. We can either choose to make a difference, or fiddle away while the earth burns.

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