Environmental Ethics: Distributive Justice in the Context of Climate Change

by Lotte Griek

Universiteit Leiden

Faculty of Political Science

Masters Thesis

Environmental Ethics:

Distributive Justice in the Context of Climate Change

June 2016

Candidate:
Lotte Griek
S0552739
Word Count:
13,373

Mentor:
Prof. Dr. Verschoor
Second reader:
Prof. Nieuwenburg

Abstract

Environmental issues have increasingly been the topic of conversation in the international political community. Finding ways to mitigate anthropogenic interference with the planet's delicate ecosystem has increasingly risen on the agenda of international policy makers in the past 4 decades. Several agreements, on the global, multilateral, regional and bilateral levels have entered into force over this period aiming to distribute the responsibilities for mitigating different environmental issues. This paper explores the three most prominent principles and combinations thereof in the political philosophical debate on distributive justice in its relation to climate change. My final verdict is that no single principle on its own suffices in addressing the moral duties states bear in burdening the costs of mitigating climate change, but rather a combination of amended versions of these three in lexical priority, best describes a just system of distribution.

Table of Contents

Chapter 1: Introducing the Research Problem

Anthropogenic interference with the natural ecosystem has resulted in environmental degradation, pollution, ozone layer damage, loss of habitat and ecological biodiversity, rising sea levels, and extinction of species. Continued demands on planet earth and unmitigated emissions have culminated into a situation which scientific consensus states is unsustainable and will have immeasurable impacts on our ability to coexist on this planet (IPCCC, 2001). The results of anthropogenic interference with the natural environment have already been profound, with effects such as increased extreme weather patterns such as droughts, flooding, temperature rise and greater and more intense storms (Singer 2002, Sachs 2014, WCED 1987). As the world population continues to grow exponentially to a predicted 9 billion by 2025[1] and our demands on the environment continue increasing at the current rate we will be pushed dangerously close to the planetary boundaries. Climate change will inevitably impact our economic welfare, food security and in the most dramatically even our ability to continue living in certain regions of the world. This has climaxed in a situation where there is an increasing and imminent urgency to mitigate the negative effects humanity has had on the planet.

Commendable global political efforts have been made in the past decades aimed at finding a fair manner in which to distribute responsibilities among states aiming to mitigate climate change (Grubb, 1995; Paterson, 2001). Under the auspices of the 'common but differential responsibility' principle, endorsed by The United Nations Framework Convention on Climate Change (UNFCCC) developed nations are most commonly attributed the greatest duties. The 'common but differential' principle is materialized within the Kyoto Protocol, the Rio Declaration on Environment and Development as well as the Paris Climate Agreement. However, participation in some of these agreements has been contentious, with, for example, the United States, which is the greatest polluter globally and historically, yet not willing to participate on the grounds that the manner in which burdens are distributed is considered 'unfair' (Jamieson, 2001). To date, reaching an international agreement successfully addressing the distribution of the costs associated with climate change remains illusive and as a result, little has been achieved in mitigating anthropogenic climate change. The theory of distributive justice concerns who ought to get what, when and how, and in particular the fair division of the burdens

[1] World Bank data: http://data.worldbank.org/indicator/SP.POP.GROW

and benefits of social cooperation (Caney, 2005). When looking at the response of the United States, and taking the inevitable consequences of current levels of pollution into account, questions arise as to what principles should help guide international distributive justice within the context of global climate change.

Earlier philosophical works on the topic of distributive justice, such as that of Rawls's in *A Theory of Justice* and later *Law of Peoples* drew a line between the applicability of distributive justice principles within the nation state and amongst states (Lamont & Favor 2014). Cosmopolitans such as Pogge strongly contested the claim that there is a difference between international and national justice and claimed there is no distinction between duties to co-nationals and people globally (Brock, 2015; Lamont & Favor 2014). Caney (2005), much like Grubb (1995), argues that the issues related to climate change 'require us to examine the global distribution of burdens and benefits'. Given the current global political debate on how to distribute the burdens of mitigating climate change, the focus of this paper will therefore be on the responsibilities states have to one another.

In climate change politics, concerns related to fairness or equity within international distributive justice is central to creating an effective response to the problem of global warming (Paterson, 2001; Müller, 2001). The debate on international distributive justice within the context of the burden sharing of the costs incurred by climate change has brought forth numerous positions about which principles should be guiding, but its solutions remain contentious and somewhat divergent. Contemporary writings of political philosophers such as Adger (2006, 2011), Allen (2004), Caney (2005, 2006, 2009, 2010), Dobson (2005), Gardiner (2004, 2006), Huseby (2013), Müller (2001), Page (2006, 2007, 2008, 2010, 2012), Paterson (2001), Sachs (2014), Singer (2002), Shue (1999) and Sterba (2006), to name a few, have provide various perspectives on the aforementioned problem. If one were to roughly sum up the arguments put forward by these theorists three principles predominantly arise, namely the polluter pays principle (PPP), the ability to pay principle (APP) and the beneficiary pays principle (BPP).

Firstly, the PPP is the starting point in the discussion of distributive justice within the climate change context. It enshrines states with responsibilities to bear costs of burdens associated with climate change relative to each state's contribution to the problem. General consensus is that moral burdens should rest on those that have harmed others through their activities (Pogge 2004; Wissenburg 1998, 2006; Wallack 2004). However, some theorists like

Caney (2005, 2006) and Risse (2008) argue that the PPP falls short in adequately allocating responsibilities for climate change burdens. These theorists, advocate for hybrids of the PPP in combination with an APP (Caney, 2005, 2006, 2010; Page, 2006, 2007; Risse, 2008; Shue, 1999) or BPP (Butt, 2007, 2009, 2012; Grosseries, 2004).

Secondly, the APP is based on the moral assumption that those who are capable of preventing harm should do so, irrespective of their contribution to that harm (Caney, 2005, 2006, 2010; Miller, 2001, 2009; Shue, 1999; Page, 2006, 2007). It instills responsibilities on industrialized countries with greater wealth to, for example, fund adaptation measures such as assisting developing countries in their efforts to develop without excessive emissions. This principle has received criticism from theorists arguing that this goes beyond what can be demanded of states, questioning why states have the responsibility to mitigate the negative effects of something they have no causal responsibility for.

Lastly, the BPP dictates states should bear climate change mitigation burdens based on the emissions incurred by previous generations, because they have benefited most from the wealth resulting from fossil fuel based industrialization. The BPP is based on the moral assumption that if states have benefited from past emissions that have resulted in harm to others, they then bear moral responsibilities to compensate those harmed (Butt, 2012; Baatz, 2013; Gosseries, 2004; Neumayer, 2000; Page, 2008, 2012). Nevertheless, this moral assumption too has fallen under scrutiny (Caney, 2005, 2006; Huseby 2013).

The aim of this thesis is to determine whether any one of the three aforementioned principles sufficiently and fairly address the responsibility of states or whether a combination thereof is necessary to account for the moral obligations of states with regards to burden sharing and distributive justice in the climate change context. Within this context, the fundamental question I aim to answer is *which of the 3 principles of distributive justice, or combination thereof, best accounts for a just distribution of the responsibilities and duties states have to mitigate and adapt to the burdens associated with climate change?* To adequately frame this debate, I must first address what each of the three aforementioned principles entail, and what their implications, strengths and weaknesses are respectively (chapter 2-4). Since several political philosophers argued that a combination of principles is needed to account for a just distributions of the burdens associated with climate change in chapter 5 of this paper I aim to address whether a combination of these principles (and if so, which combination) most

adequately accounts for a just distribution of the responsibilities to adapt and mitigate to the burdens associated with climate change.

A development of the debate on this topic can provide ideas and alert policy makers as to whether responsibilities ought to be distributed differently (Wiegandt, 2001) than how they are currently distributed within, for example, the 'common but differential responsibility' principle found within existing environmental agreements. These agreements on climate change, such as the Kyoto Protocol and the Rio Declaration on Environment and Development, are argued to have yielded little result (Tollefson 2012) due to contestations of participating states regarding the fairness of said agreements. "Society is faced with a choice about whether to stay with current laws, policies, etc. or to modify them (and) the practical contribution of distributive justice theory is to provide moral guidance for these constant choices." (Lamont & Favor, 2014).

The application of principles of international distributive justice within the climate change context is a relatively new topic on the political philosophical agenda (Blake & Smith, 2015). With this thesis I aim to contribute to the philosophical debate on international distributive justice within the climate change context by providing a thorough discussion of the implications, strengths and weaknesses of each of the three core principles and combinations thereof, as presented by philosophers to date. By reflecting critically on the different perspectives brought forth by political philosophers to date, I hope to provide readers with a useful overview of existing standpoints and provide meaningful novel insights within this debate. If the analysis of distributive justice has a practical application, then the continued pursuit of an academic debate on the matter is essential for the successful mitigation of climate change. Analyzing this topic could contribute to increasing the understanding of whether international environmental agreements could have greater success in attaining membership, provided certain principles of fairness in distributive justice are met (Wiegandt, 2001).

Chapter 2: The Polluter Pays Principle (PPP)

2.1 The PPP and its Implications

Following the UN Conference on Environment and Development in Stockholm, the PPP principle was coined and adopted by the OECD in 1972. The PPP was then intended to allocate "costs of pollution prevention and control measures to encourage rational use of scarce environmental resources" requiring the polluter to bear the expenses of the burdens associated with climate change (Khan, 2015: p640). The PPP has evolved and taken shape in policy as principle 16 in the Rio Declaration on Environment and Development of 1992 and in the formation of the Kyoto Protocol and countless national and regional environmental agreements (Bugge, 1996; Grossman 2006).

The PPP is one of the founding principles of distributive justice within the climate change context (Bugge, 2011: p411-413; Baatz 2013: p95; Khan, 2015: p439-40). Khan sites Plato in the origins of the PPP, who stated that: "If anyone intentionally spoils the water of another… let him not only pay for damages, but purify the stream or cistern which contains the water" (Khan, 2015: p639). The 'harm principle' coined by John Stuart Mill arguing that "the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others" (Mill, 1978: p9; Brooks, 2012: p2-4), underlies the PPP. Following scientific research on climate change, it is now clear that anthropogenic interference with the environment, including excessive emissions since the start of the industrial revolution, is responsible for climate change. Moreover, climate change will result in a potential threat to health, life, subsistence and the capacity to attain a reasonable standard of living.

There is general consensus that the moral burden falls on those that have harmed others by their activities (Pogge, 2004; Wissenburg, 1998, 2006; Wallack, 2004). When applying Mill's harm principle to climate change, those states which contributed to climate change are responsible for inflicting harm on others and therefore have the moral obligation to restitute that harm. The duty to aid those harmed by the pollution is instilled proportionately to the harm they have caused (Brooks 2012, Shue 1999). In its most basic form, it can be defined that if actor A performs an action that causes climate change, then that actor bears the responsibility of paying for the burdens associated with climate change. However, Simon Caney argues that since a

single actor does not cause climate change, the aforementioned principle can be developed to include multiple actors, amending the statement to read that: "If actors X, Y and Z perform actions which together cause pollution, then they should pay for the cost of the ensuing pollution in proportion to the amount of pollution that they have (each individually) caused" (Caney, 2005: p753). This could be measured by calculating the cumulative emissions of a state over a given period of time. The PPP "requires the polluter to bear the expense of preventing, controlling, and cleaning up pollution." (Grossman, 2006: p3)

Practically, the PPP is applied in varying ways in different countries, but most commonly, it entails the attribution of both positive and negative duties to states (Khan, 2015: p642-44). In its application to climate change, the PPP enshrines negative duties on industrialized states in the sense that they must stop polluting at their current unsustainable levels. However, the impacts of climate change will not be sufficiently mitigated only by reducing emissions. The PPP therefore also instills positive duties on industrialized states, such as requiring them to provide compensation for the harms caused by their pollution to developing nations. These nations have and will continue to suffer the consequence of changing climate such as increased droughts, which could affect food security in developing nations, and rising sea levels, which could jeopardize coastal regions. Furthermore, the PPP also requires industrialized states to mobilize financial and technological resources to developing states, in order to ensure that these can develop without going through the same heavily emitting process as the industrialized states (Khan, 2015, p646).

2.2 Critique of and Amendments to the PPP

The application of the PPP is claimed to have logical and 'intuitive appeal' (Caney 2005: p752), nevertheless, it has not gone without critique.

2.2.1 Historic emissions:

The first and strongest critique of the PPP relates to its ability to fairly attribute responsibility for historic emissions. Industrialized states have economically benefitted through industrialization and in doing so, have polluted since the start of the industrial revolution. It is argued that states ought to bear the burdens according to their 'contribution to the problem' (Page, 2008: p557-560; Shue, 1999: p533) of climate change, and thus 'of managing climate change in proportion to their share of global cumulative greenhouse emissions' (Page, 2008:

p557). However, asserting that states should today carry the burden of emissions caused by past generations is the largest point of contention against the PPP principle (Caney 2005: p757–759; Page 2006: p132–142).

First and foremost, Page and Caney present the non-identity problem, initially introduced by Parfit (1984), as a rationale for why there is an issue with accounting for historical emissions. Page (2006: p132-142; 2008: p560) and Caney (2005: p757; 2006: p269) use the non-identity problem to demonstrate that current generations cannot be justly held accountable for the actions of those who are no longer alive today to take the responsibility. The main argument brought forth within the non-identity debate, which is applicable to the topic of climate change, states "that an act that confers on a person an existence that is, though flawed, worth having in a case in which that same person *could never have existed at all in the absence of that act* does not make things worse for, or harm, and is not "bad for", that person" (Roberts, 2015). To elaborate, each and every person that has come into existence has only come into existence because they were made by the combined genetic make up of their parent, and were arguably conceived at a given point in time. "As Parfit observes, the woman who wonders who she would have been had her 'parents married other people' 'ignores the answer,' which is 'no one'" (Parfit, 1987: p351; Roberts, 2015). Industrialization is argued to have contributed to the conditions whereby we have been able to come into existence today. Were industrialization not have taken place, human beings alive today probably would not have been born at all. If industrialization gave rise to improved standards of living, infrastructure, education systems, and health care systems, then this progress has allowed people alive today to be born in the first place. Were it not for industrialization, an entirely different set of humans would inhabit the earth today (Baatz, 2013: p100).

Given the aforementioned, the non-identity problem entails that one cannot conclude that 'historic injustices' have harmed people that exists today, for were these so-called 'harming activities' not to have taken place, people today would not have existed to begin with. If industrialization is part of the causal chain of one's existence, then no one can be said to have been harmed by it either (Roberts 2015). In line with this reasoning, Caney concludes that people cannot be said to have been disadvantaged or harmed by climate change, hence, there is no need for anyone that exists today to bear the burden of mitigating climate change that was caused by our ancestors.

Secondly, another argument against historic accountability states that because the perpetrators of polluting activities are now dead, they can no longer be held accountable. Current generations cannot fairly be burdened with mitigating the negative effects of climate change caused by our forefathers. Because the polluter is dead, the duties to mitigate his pollution must be allocated to someone else, and therefore the PPP would require supplementation in order to address this gap (Caney 2005: p756; 2010: p211). Caney argues that there was a significant increase in emissions between 1800 when it is estimated that emissions were at 8 million metric tons, to 1950 when emissions raised to 1630 metric tons. Since the people responsible for emissions during this period are mostly dead by now, the PPP is argued to fail in addressing the brunt of historic emissions (Caney, 2010: p211).

The aforementioned argument is most powerful when applying the PPP to the individual; however, I agree with Caney's argument that in taking a collectivist approach, for example, by looking at states as the relevant entities to be held responsible for pollution, the premise that the PPP does not hold because the polluter is dead is incorrect. (2005: p 758, p774). Caney states that "if we take a collectivist approach we might say that since Britain (the collective) emitted excessive amounts of GHG's during one period in time, then Britain (as a collective) may a hundred year later, say, be required to pay for the pollution it has caused… To make this collective pay *is* to make the polluter pay" (Caney 2005, p758). If one does not take this collective approach, there would be no actor that could be held accountable for any pollution created in the past and hence a large share of the pollution that contributed to the problem of climate change would be left unaccounted for under the PPP. I would argue that a state must therefore be considered to be more than simply a sum of the individuals in it, in that it is comprised of a shared history, common culture, laws and the institutions. Taking the UK as an example, although the individual members might have changed over time, the House of Lords and the House of Commons have existed for the past 200 years and continue to exist.

Lastly, some, like Shue and Neumayer, have argued that state borders may have shifted since the beginning of the industrial revolution, and that this could result in a difficulty in fairly allocating duties to specific states based on historic contributions to climate change (Neumayer, 2000: p189; Shue, 1999: 541). For example, in the case of the former Soviet Union, spanned across a geographic area that now constitutes numerous nation states. Nevertheless, this argument too is deemed negligible by some (Grubb, 1992: p316; Neumayer, 2000: p189), given

that those countries that have predominantly been responsible for historic emissions have not experienced such border fluidity issues. The United States, Australia, Japan and most western European countries are examples. Their activities have been estimated to account for 85.9% of the concentration of GHG's in the atmosphere since 1800 (Grüber & Fuji, 1991) yet their borders have not experienced significant changes over said period (Neumayer, 2000: p.189).

2.2.2 Excusable ignorance:

Several authors have argued that there is an issue of 'excusable ignorance' for historic emissions (Baatz, 2012: p96; Caney, 2005: p761; Grubb, 1995: p491; Page, 2008: p560; Shue, 1999: p536), maintaining that the PPP cannot prescribe responsibility for past emissions because people were ignorant to the fact that pollution caused climate change. Whereas cumulative emissions since the start of the industrial revolution have culminated in the dangerous CO2 concentrations currently found in our atmosphere, until the 1980's or 1990's, they argue that there was no scientific consensus that greenhouse gas emissions actually resulted in anthropogenic climate change. Baatz (2012: p96) argues that given there was no knowledge that their activities were causing harm, they also cannot be considered wrongful. Without 'calculated wrongdoing', the argument for historical accountability is weakened to the extent that some consider to no longer be applicable (Caney, 2005: 761; Page, 2008: p560).

Shue similarly argues that industrialized nations have long continued increasing emissions since scientific consensus was reached, and should at least be held responsible for their emissions since they knew these were damaging (Shue, 1999). Neumayer (2000: p187-190) claims that even if there was a case of ignorance, this could only realistically apply to emissions before the 1980's at which point it became known that that unabated increases in emissions would cause climate change. In order to account for the 'excusable ignorance' issue, these authors propose an amendment to the PPP stating that it should apply to damages done starting from the moment scientific consensus arose that emissions could result in anthropogenic climate change.

2.2.3 Newly industrializing nations:

Neumayer argues there should be an equitable distribution of emissions rights. Where industrialized nations have already exceeded their emissions quotas (especially when accounting for historic emissions), nations that still need to industrialize should be permitted to increase

their emissions and claim their due share of a so-called global carbon budget. The Kyoto Protocol exemplifies this by delegating industrialized states with the duty to disproportionately reduce emissions, while it does not instill any such restrictions on nations who have not undergone industrialization yet. This inevitably opens the door for developing countries to increase emissions to potentially harmful levels, which has already materialized in the case of China and India. China's cumulative emissions already exceed total yearly emission levels of the United States (Wesely & Peterson, 199: p192).

On a per capita basis, China emits (and has historically emitted) much less than the United States. Currently, 41% of global emissions come from industrializing countries, where over 80% of the global community live in those countries. If we look at international proposals aiming to curb anthropogenic affects on climate change, these determine that only a certain amount of emissions can still be added to the atmosphere, a so called global emissions budget. Egalitarians would argue that disproportionate duties should be placed on developed nations to curb their emissions because they have already used up their fair share of the global emissions budget by way of their historic emissions, which would allow enough leeway in the global emissions budget so as to allow industrializing countries to increase their emissions (Grubb, 1995: p485). Page (2008; p571-574) uses this to illustrate that industrializing states still have rights to continue increasing emissions in line with their equitable share of emission budget. Moreover, restricting developing nations' right to emit would negatively impact their standard of living and would therefore be morally unacceptable.

It is argued that industrializing poor nations should not bear costs for the pollution they create, because it is unfair to ask too much of them (Caney 2005: p763, 2010: p212-213). Caney claims that newly industrializing states cannot fairly be made to bear burdens of mitigating climate change under the PPP, because costs cannot be imposed if those costs would impede their ability to a attain a decent standard of living. Given that China and India, and most other developing countries do not yet enjoy a decent standard of living, they should be allowed to develop unhindered until they attain said standard of living. Shue similarly argues that poor countries should at least have a right to a certain threshold which he coins a 'guaranteed minimum' (Shue, 1999: 540-544). Agreeing, Caney suggests an amendment of the PPP in order for it to be considered a 'just' principle circumventing the poverty issue mentioned above:

> "Persons should bear the burden of climate change that they have caused so long as doing so does not push them beneath a decent standard of living (the Poverty-Sensitive Polluter Pays Principle)." (Caney 2010, p218)

Given the aforementioned critiques of the PPP, Caney (2005, 2006, 2010), Page (2006, 2007), Risse (2008) and Shue (1999) argue that there is a need of an additional principle to complement the PPP, which is able to address these concerns. The following section will therefore discuss the implications and critiques of one such principle presented by these theorists, namely, the 'ability to pay' principle.

Chapter 3: The Ability to Pay Principle (APP)

3.1 The APP and its Implications

I agree that, although a just principle, the PPP falls short in addressing emissions from past generations, as well as the ability of impoverished people to pay for their contribution to the problem. It would therefore be correct to assume that a portion of the burdens of mitigating climate change remains unaccounted for (Baatz, 2013; Caney, 2005, 2010). Caney states that there could be any of three alternatives for the allocation of duties stemming from the gaps in the PPP, namely, a) duties could be ascribed to the poor; b) we could allow climate change to continue which is guaranteed to result in disproportionate harm to poor people; or c) duties could be ascribed to the wealthy who have the 'ability to pay'. It is essential to note that in the philosophical debate on distributive justice in the climate change context, the APP, unlike the PPP, is never suggested as a stand-alone principle. Theorists propose the APP as a secondary or complimentary principle of distributive justice to the PPP, aiming to fill the aforementioned gaps. This chapter will provide an overview of the debate surrounding the APP, highlighting its implications and its main critiques. Further analysis of the strengths and weaknesses of the combination of the PPP with the APP will be addressed in chapter 5 of this paper.

Caney, Page and Shue support the APP as a principle of 'justice and equity'. They argue that within the climate change context, corrective duties should be instilled upon the affluent (Caney, 2005, 2010; Kahn 2012; Page, 2006; Shue, 1999). Wesley and Peterson similarly state that developed nations are "rich enough to be able to absorb the costs of corrective actions without suffering undue harm" (Wesely & Peterson, 1999: p178). In a simplified example inspired by Caney (2005: p770), under the auspices of the APP, it is assumed that if you walk along a lake and witness a child drowning, and you are able to swim, even though you are not to blame for her downing, you are morally obliged and have a duty to come to her assistance.

Although interpretations of the principle might vary slightly, the APP applied to climate change as presented by its proponents (Caney, 2005: p770, 2010: p215; Miller 2001: p460-61; Page, 2012: p305; Shue, 1999: 537) can be summarized as follows:

> If state A has the capability of mitigating and/or adapting to climate change, it should do so, irrespective of whether or not it has contributed to the problem of climate change.

The APP currently forms an essential part of climate agreements such as the Kyoto Protocol (KP), which classifies states into two groups, one roughly consisting of wealthy industrialized states (Annex 1 countries) and one consisting of relatively poorer unindustrialized states. Within the KP, Annex 1 countries bear duties towards climate change adaptation and mitigation, whereas non-Annex 1 countries are not required to limit emissions or provide funds towards remediation (Wesley & Peterson, 1999: p170). Within the 'common but differential responsibility principle' the APP presumes that those with the means to pay to mitigate problems resulting from global climate change should do so, whereas those who do not have the means should be unburdened until these nations come into relative prosperity which would allow them to bear the costs of climate change mitigation and adaption. Within the UNFCCC commitment to climate action, the delegation of responsibilities is to states with comparatively higher aggregate net wealth in shouldering the burdens, and should do so according to their 'respective capabilities' (Page, 2012: p305).

Effectively, the APP demands that the 31 high-income states cumulatively accounting for 65% of global GDP should shoulder the burden of mitigating climate change (Page, 2012: p305). Some practical implications of this principle enshrines states with the duty to aid countries that are unable to adapt to climate change, such as supporting poor coastal cities in implementing storm and sea level rise protection measures; financing R&D efforts aimed at the development of environmentally friendly technologies since they have the means and technological advancements to do so; and reducing their emissions disproportionately in order to allow poor nations to their equitable share of the so-called emissions budget.

Although their defense of the principle differ slightly, modern proponents of the APP in its application to distributive justice within the climate change context include authors like Shue (1999), Caney (2005, 2006, 2010), Huseby (2015), Page (2006) and Risse (2008). In the previous chapter, the critique of the PPP demonstrated that it fell short in addressing a portion of the pollution that contributed to the problem of climate change. By using the APP as a complementary secondary principle to the PPP, scholars argue these gaps are addressed, given

that responsibility to bear the costs of mitigating climate change is allocated to whose who have the greatest ability to pay.

3.2 Critique of and Amendments to the APP

Although at first glance the applicability of the APP might appear straightforward, there are those who question its fairness.

3.2.1 Creating equity and ensuring a minimum standard of living

One approach taken by advocates of the APP concerns creating equality amongst countries, and therefore prescribes emissions rights on a per capita basis. Shue argues from the egalitarian perspective, stating that *if* states have a duty to contribute to solving a common problem, then the states that have more means to contribute should do so (Shue, 1999: p537). This reasoning is based on the fact that you cannot expect the same level of contribution from the poor because doing so would imply threatening them into further impoverishment and their ability to develop. Shue's application of the APP seeks to ensure the concept of a 'guaranteed minimum' endowing the responsibility to bear the costs of climate change on wealthy industrialized nations rather than on the developing world (Shue, 1999: p540-44).

Grubb similarly agrees that with respect to the duties of the poor, in that they cannot be expected to fall beneath a minimum standard of living, stating that developing nations cannot be allocated costs that would impede their social development and poverty reduction efforts. By default, this shifts responsibilities one would have initially attributed to poor developing nations, to wealthy industrialized nations. In his scenario, wealthy nations remain the only party able to bear the burdens associated with climate change (Grubb, 1995: p492-493).

3.2.2 Moral duty to contribute:

A main contention in applying the APP questions why wealthier states should bear duties to contribute to mitigating a problem, simply because they have greater wealth. As argued by Page, "although focusing on ability to pay is undoubtedly of relevance in the construction of effective and equitable climate policies it leaves unanswered why those who have the ability to pay should pay" (Page, 2006: p562). Although in practice the vast majority of wealthy states have also been those that have historically emitted the most, there are exceptions, such as, for example, Switzerland. The APP is argued not to distinguish between those states that have attained their wealth by means of industrialization and hence contributing to the problem of

climate change versus those that have attained a their wealth doing so without excessive emissions and hence without contributing to climate change equally. As an illustration, if both country A and country B are wealthy, but A has come about its wealth by means of pollution, and country B has not, then it would be unfair if country A and B were prescribed the same costs to mitigating climate change. The APP falls short in being historically sensitive, in the sense that it fails in accounting for the past activities of states respective to their contribution to the problem.

In line with this argument, opponents of the APP question why those who have succeeded in developing cleanly should pay for the faults of countries which have failed to do so. Caney (2010: p214-215) and Page (2008: p561-562) therefore argue that the APP should be amended by including a clause allocating 'differential responsibility' based on the extent to which a state has 'contributed to the problem'. Caney's thereby edits the APP in order to establish what he considers a more just version of the APP. His amended version of the APP, the 'historically-sensitive APP' reads as follows:

> "The duties to bear the Remainder should be borne by the wealthy but we should distinguish between two groups – (i) those whose wealth came about in unjust ways, and (ii) those whose wealth did not come about in unjust ways – and we should apportion greater responsibility to (i) than to (ii)." (Caney 2010: p215)

In Caney's revised APP, he successfully accounts for the difference between those who have benefitted from past emissions and those who are have 'innocently' developed without benefitting from past emissions.

3.2.3 Disposable wealth vs. total wealth:

Page argues that not all wealthy countries should shoulder the burdens of climate change equally, but rather proportionately to their level of *disposable* income, rather than simply their net wealth (Page, 2010: p561). This opposition to the APP questions whether simply having a *comparatively* higher standard of living is sufficient grounds for attributing ethical responsibilities to wealthy nations. Take for example the case where a wealthy country only has enough resources to ensure the basic needs of its population are met. If wealthy states, like poor states, also have the right to continue to meet their peoples' basic needs then it would be considered unethical if they were allocated costs for mitigating climate change which would push them below a certain standard of living as a result.

In Shue's description of the APP, he simply delegated the wealthiest states with the most responsibility (Miller, 2001: 460-61; Shue, 1999: p537). Page (2012, p305) argues, however, that Shue thereby insufficiently accounts for wealthy nations that may not actually have the ability to pay without jeopardizing their standard of living making their citizens considerably worse off. He therefore concludes that although wealthy states should carry costs of climate change, duties should only be allocated to those states with excess means, rather than a given net amount. Hence, if a state has more 'available' resources, stricter obligations would be enshrined on that state because it has a higher *capacity* to bear the costs. As states gain more disposable wealth, they should put more towards mitigating climate change. This amended version of the APP can read as follows:

> States that have a greater ability to pay should pay for the costs of mitigating climate change, but those that have greater capacity to contribute should contribute more than those who have less capacity to do so.

Chapter 4: The Beneficiary Pays Principle (BPP)

4.1 The BPP and its Implications

In the previous section we dealt with the APP in detail. In this section the focus will shift to the implications of the Beneficiary Pays Principle (BPP) and critiques thereof. Similar to the APP, the BPP is presented by some theorists as an alternative secondary principle to the PPP addressing the shortcomings described in the chapter 2 of this paper, in particular its ability to account for and allocate responsibilities for the emissions made by past generations (Huseby, 2015: p211). In its simplest form, it dictates that beneficiaries of activities that took place in the past, which caused harm to others, should bear costs for compensating victims of those activities.

The activation of the BPP can best be illustrated by way of elaboration of a practical example. One such example is presented by Huseby (2015, p216), who builds on simplified versions of cases presented by Grosseries (2004, p43) and Butt (2007: p132). His example reads as follows:

> *"A benefits, B is harmed, and C is wholly unaffected, by D's past (unjust) action. D is by now dead." (Huseby, 2015: p216)*

In his example, Huseby illustrates that when an actor has committed a wrong, but the perpetrator is no longer around to assume the responsibility of his actions, there remain 3 actors, A, B and C. Given that A has benefited and B has been harmed by the actions of D, under the BPP, the responsibility to mitigate the harm inflicted on B falls upon A.

The main assumption under the BPP when applied to climate change is that since the industrial revolution, certain states have been able to industrialize by way of harmful emissions from which they have benefitted through economic growth. Industrialized nations would not have experienced the prosperity they enjoy today were it not for this process. They have therefore benefitted, albeit not deliberately, from past emissions. The BPP in the climate change context enshrines duties on those who have benefitted from the environmental harm caused by past generations, even though they have not contributed to the problems themselves (Baatz, 2013; Grosseries, 2004: p43-46; Page, 2008: p562; Page, 2012: p304). In its application to this debate, the BPP reads as follows:

> If state A has benefitted by way of industrializing from past pollution, and state B has suffered because of said pollution, then state A should bear the costs of mitigating and adaptation to climate change. (Huseby 2015, p212-213)

Another core assumption of the BPP is that burdens involved with mitigating negative effects associated with climate change should be distributed at a comparative level to the benefits derived from the activities that have lead to climate change. Hence, if a state has benefitted more from past emissions, it should proportionately shoulder a greater part of the burden. (Butt, 2007: p132; Caney, 2006: p471; Page, 2008: p562; Page, 2011: p420; Page, 2012: p302-303).

As noted before, the effects of polluting activities of a particular state are not confined within its borders. Rather, these activities also have negative effects disadvantaging other states. Some political philosophers, including Butt (2009, p127), Grosseries (2004: p43-46) and Page (2011: p420-422, 2012: p306) argue that an activity that results in harm to others is considered an injustice and those who benefit from injustice are morally required to fix that injustice. In the case of climate change, this instills remedial duties to mitigate climate change on wealthy industrialized nations that have benefitted from past emissions (Butt, 2007: p135; Page 2012: p306).

4.2 Critique of and Amendments to the BPP

At first glance it would seem that the BPP is a good alternative to some of the concerns presented in the previous chapter where I dealt with the APP (such as the concern that it is too morally demanding to require states to bear costs simply because they are wealthier, and irrespective of their contribution to the problem). However, the BPP is not without its critique. Let us now, in turn, dissect the strengths and weaknesses of the BPP.

4.2.1 Involuntary benefits

An objection to the BPP questions whether states can be held accountable for climate change and be made to bear responsibilities for mitigating this if they *involuntarily benefitted* from past emissions. People were not asked before they were born into affluent industrialized countries that attribute their development to past pollution and there is no real way for the current generation to avoid the benefits associated with the increased standards of living ascertained through industrialization. Should a state that involuntarily benefitted from past emissions, be

made to bear 'compensational duties' for the harm caused by that from which they are benefitting (Baatz, 2013: p98-99)?

Butt argues that irrespective of the fact that benefits have been accrued involuntarily, obligations are created because these benefits arose from past injustice. This injustice arises because while certain states have benefitted from past emissions, others suffer harm because of it. According to Butt, "if the events which cause agent C to fall below the morally relevant threshold confer benefits upon agent B, then the fact of the receipt of these benefits, however involuntary, establishes a morally relevant connection between C and B, which may give rise to remedial obligations on the part of B." (Butt, 2007: p133) Accordingly, Butt argues that as moral agents, we should have an 'aversion' to committing acts of injustice and accrue duties if unjust acts performed by others have resulted in benefits we enjoy (Butt, 2007: p143).

Baatz builds on this line of reasoning, stating that the BPP can be used as a redistributive principle "if someone is seriously harmed through no fault of her own and the harming agent cannot be held liable" (Baatz, 2013: p98). He claims that the BPP provides the guidelines instilling redistributive responsibilities, where the actors that would have been held accountable under the PPP have not addressed their compensatory obligations. Those who have received net benefits should compensate those who have been harmed (Baatz, 2013: p98-99).

4.2.2 Non-identity problem:

Another objection to the BPP is the 'non-identity' problem presented in Chapter 2. This objection, based on Parfit's line of reasoning, holds that people alive today would not have been alive today were it not for the actions of past generations. Following Parfit's line of reasoning, past pollution cannot be said to benefit anyone today, nor cause harm on anyone alive today because without it, neither group would have existed in the first place (Caney 2006: p474-476; Page, 2008: p562-63; Page 2012: p318). As argued in chapter 2, where the non-identity problem indeed provokes issues of burden sharing on the individual level, at the state level, this is less of a problem. Relative to individuals, states have a more continuous existence (Caney 2006: p474-476). Hence, "states should bear climate burdens according in proportion to the benefits they have accumulated from activities that cause climate change" (Page 2012; p319).

Furthermore, and perhaps more convincingly, Page argues that more than 50% of the CO2 concentrations in the atmosphere today are a result of polluting activities that have taken place between 1980 and 2008. Simultaneously, during the same period, global output has risen

from USD12 trillion to USD72 trillion. Many of the benefits current generations enjoy are a result of activities of existing people and will affect individuals alive today as well (Page, 2012: p320)

4.2.3 Chronological unfairness

Page dubs a main concern with the BPP the 'chronological unfairness objection' (2012: p317). This argument is also presented by Caney (2006, p473), who suggests that making the current generation pay for the costs of past contributions to climate change unfair and overly demanding. He comes to this conclusion by reasoning that many generations have incurred benefits from past emissions. However, past beneficiaries have not had to pay the costs of mitigating the negative effects of climate change. Caney assumes that according to the BPP, each beneficiary should pay according to the benefits they have incurred from past emissions. Placing the full brunt of the responsibility to mitigate the negative effects of climate change on beneficiaries that are alive today would mean that they would have to pay for their benefits, as well as those of other beneficiaries that are no longer alive to foot their bill. Hence, the problem with the BPP is that because the burden falls on the current beneficiaries who have to shoulder the burden derived from their benefits as well as of the benefits of past generations, the principle is too demanding and unfair.

Page (2012, p317) provides two powerful counterarguments to the 'chronological unfairness objection' presented by Caney. First, he observes that the BPP requires states to pay only their 'net benefit', rather than paying for the cumulative benefits enjoyed by current and previous generations. This significantly reduces the burden that is attributed to current beneficiaries. Page reasons that all past generations have contributed to the rapid growth in global income since the start of the industrial revolution and the corresponding wealth enjoyed by the current generation. Therefore, the benefits of past emissions have not been exhausted by previous generations, but in fact, all past generations have contributed to the current benefits we enjoy today. Secondly, Page, building on theory presented by Grosseries (2004, p47) argues that the BPP includes a proviso, which ensures that states cannot be made to pay what he calls 'debilitating costs' (2012: p317-318). Under this assumption, states cannot be held liable to bear burdens so great that these would result in imposing harm on their citizens and their current standard of living.

4.2.4 Quantifying received benefits

Another issue that complicates the application of the BPP is that there is a need to be able to calculate what benefits have arisen from polluting activities in the past and what part of a nation's wealth has not arisen from polluting. Butt argues that if there is no way to distinguish between these two, then it would be impossible to allocate an accurate and fair part of the burden of mitigating climate change to a specific state (Butt, 2009: p130-132; Page, 2012: p321). "The BPP faces the problem that there are no established protocols for establishing how much the UNFCCC states have been unjustly enriched in financial terms from the activities that cause climate change" (Page 2012: p322).

However, Page claims that to a certain degree, all wealth accrued and all development experienced, can be traced back to the process of industrialization (2012: p324). With this assumption as a basis, Page attempts to provide a manner in which one could attempt to calculate the financial share of the burden a state should carry in order to mitigate climate change. Nevertheless, he admits that "burden sharing analysis based on the BPP have yet to provide a convincing answer to the practical problem of separating the elements of national wealth originating in climate altering activities and the elements of national wealth originating in non-climate altering activities" (Page 2012: p322, 327).

Chapter 5: Critical Reflection

In the previous three chapters I have provided an overview of the implications of the PPP, the APP and the BPP and delved into the critiques of each of these principles in order to assess the extent of each one of their merits. Assessing each principle individually has clarified that each has certain deficiencies in guiding a fair and complete method to distribute the burdens associated with mitigating and adapting to climate change. In response to these deficiencies, theorists have proposed amendments to each of the principles to ensure a just distribution of responsibilities with respect to distributing the costs of climate change. Most theorists introduced in this paper have duly argued that a combination of principles, such as a combination of the PPP with the APP, or a combination of the PPP with the BPP, rather than the PPP alone, is necessary to fairly and adequately distribute the responsibilities of mitigating climate change.

In this section I will critique combined principles presented by different authors in order to determine whether these proposals provide an adequate and fair distribution of the burdens associated with mitigating climate change or whether, in my view, shortcomings remain. In the final section of this chapter, I aim to propose my own combination of principles, which based on my critique of the combined principles presented in the next two sections would most suitably address the issue of distributive justice within the climate change context.

5.1 Combining the PPP and APP

In an attempt to address the shortcomings to the PPP identified in chapter 2, some theorists propose a combination of the PPP with the APP. I will address the combined theories of two of the scholars who have proposed amendments to the original principles mentioned in the previous chapters as they rightfully mitigate some of the main contentions to these original principles. Firstly, Shue, having difficulty attributing responsibility over historic emissions under the PPP given the 'excusable ignorance' argument, reformulates the PPP into what he calls the 'historically sensitive PPP'. To this he adds the APP complimenting the 'historically sensitive PPP' by ensuring that those with the 'ability to pay' address the costs arising from the remainder of the pollution that contributed to climate change unaccounted for under the PPP (Shue 1999).

A second scholar, Caney, similarly argues for what he dubs a 'hybrid' of the PPP and the APP. He argues for a combination of an amended version of each of these two principles. For the

PPP he considers a revised version consisting of two backwards looking components attributing duties to those who have contributed to the problem of climate change, namely a) that "all are under the duty not to emit greenhouse gases in excess of their quota", and b) that "those who exceed their quota (and/or have exceeded it since 1990) have a duty to compensate others (through mitigation or adaptation) (Caney 2005: p769). He supplements this with the APP, consisting of two forward looking components, namely a) that the most advantaged should bear the responsibility of reducing their GHG emissions in proportion to the harm they have caused, and to address the negative side effects of climate change, and b) that the most advantaged are endowed with the duty to build institutions that discourage future non-compliance (Caney 2005: p769).

Whereas supplementing the PPP with the APP, as suggested by Shue and Caney is a step in the right direction as opposed to taking any one principle individually, I consider that it still inadequately addresses the distribution of burdens associated with climate change for several reasons.

5.1.1 Applying the 1990 cut-off for historic emissions:

Whereas to a certain degree I agree with each of the aforementioned authors in that it is difficult to attribute responsibility over activities when there was no scientific consensus that there these activities might have long term global negative impacts, I remain skeptical about the proposed cut-off points suggested limiting this to the 1900's. I question whether this cut off point is too lenient in that it leaves a rather large part of historic emissions, namely those accrued between 1750-1990, unaccounted for and simply delegates responsibility for it under the APP. Moreover, neither author sufficiently builds the argument as to why this cut off should be adhered to as opposed to any earlier date.

Both Shue and Caney use the establishment of the UNFCCC, which was adopted in May 1992, as a reason why the 1990's should be used as a cut-off point before which there could be an argument for 'excusable ignorance'. It cannot be denied that political awareness existed given the resounding traction pollution issues were having on the international political agenda, culminating in the first UN assembly of international leaders as early as 1970 at the UN Conference on the Human Environment. Following studies in the early 1970's, the Montreal Protocol on Substances that Deplete the Ozone Layer took effect as of 1987 demonstrating that there was recognition that pollution could have detrimental impact on the earth. In 1988 the

International Panel on Climate Change (IPCC). Taking 1990 as a cut-off point before which there could be an argument for 'excusable ignorance' would mean to deny that international political awareness had existed since much earlier, given the international meetings which started taking place and the establishment of international institutions tackling the topic.

Furthermore, research, albeit disputed, indicating that climate change could be linked to the anthropogenic interference with the earth's environment was first published in 1896 by Svante Arrhenius. Although he made the first step in linking CO2 levels in the earth's atmosphere to climactic changes, given the low levels of CO2 in the atmosphere then, he believed that it would take thousands of years before these effects would materialize in an actual rise in temperatures. Nevertheless, his estimates showed that human induced CO2 emissions could have a warming effect on the planet of up to 5-6 degrees (Arrhenius, 1896). Building on Arrhenius's discoveries, since the 1950's, research continued on the effects of contaminants in the earth's atmosphere and their probable impact on global temperature changes increasing awareness of the probable link between human induced emissions and climate change. Following a prominent publication, *The Population Bomb* (Ehrlich, 1968), making this link more concrete, NATO established the first research hub dedicated to researching anthropogenic impacts on the environment, and more specifically the GHG effect. Given the aforementioned studies and the establishment of an international research hub dedicated to researching the topic, states cannot be said to be 'ignorant' to the effects of anthropogenic interference with the atmosphere prior to 1990. The 1960's would seem a more reasonable cut-off point.

Secondly, I argue that 'excusable ignorance' cannot be assumed if there is proof of negligence. Take for example the London smog episode of 1952, which resulted from excessive coal burning in that year's exceptionally cold winter months. There was a significant rise in mortality due to lung related illnesses, which the UK government recognized was attributable to the rise in coal emissions. Given the awareness since that time that excessive fossil fuel emissions could have harmful impacts on human health, it cannot be argued that there was ignorance of the dangers of rising fossil fuel emissions. Although this event did not necessarily create the knowledge that emissions could result in anthropogenic climate change at a global scale, it did create an awareness of its dangers to human health. Since that time, however, although the UK implemented Clean Air Acts in 1956 and 1958, these were limited to banning black smoke rather than all fossil fuel emissions, and since then overall emissions have increased

over time and so have alleged annual pollution related deaths. Failing to act in a precautionary manner with respect to safeguarding human health, when the state at least had awareness that it would be prudent to do so, could be considered negligence.

Given the aforementioned arguments, states cannot be considered 'excusably ignorant' to the negative effects of pollution until 1990. Conclusively, as opposed to Caney and Shue, I would consider it prudent to amend their versions of the PPP, with a much earlier cut-off point for attributed responsibility over historical emissions. Moreover, incorporating an earlier cut-off point for the PPP would leave less of the burdens associated with climate change to be distributed under the APP as suggested by Caney and Shue, or alternatively under the BPP, which will be discussed in section 5.2 of this paper.

5.1.2 Duties of developing countries

Another compelling argument addressed by the combining the PPP with the APP is that the PPP would unfairly burden poor nations who have yet to develop, which egalitarians and sufficientarians argue should be allowed to reach varying standards of living before gaining responsibilities over mitigating climate change. Shue and Caney both use the APP to mitigate the fact that under the PPP responsibilities that stem from poor polluting nations, which cannot be made to bear the costs associated with their contribution to the problem. They assert that these be attributed to those with the ability to pay instead. However, their solutions do not entirely sit well with me.

Firstly, some estimations assert that by 2030, emissions produced by newly industrializing countries will exceed cumulative developed nations' emissions. As mentioned before cumulative (not per capita) annual emissions of China already exceed those of the US, which is the next biggest emitter globally. If left uncontrolled, developing nations will become bigger contributors to the problem of climate change in the near future, and neither Caney nor Shue hold them accountable for their activities nor allocate any duties to them. I consider it imprudent, on a practical level, to allow such rising emissions irrespective of whether developing countries are doing so in order to rise out of poverty by industrializing. Not attributing responsibilities to newly developing nations would increasingly place the burden on those with the 'ability to pay' as suggested by Caney and Shue, which can hardly be considered fair. Inasmuch, where developed nations should be enshrined with the duty to reduce their emission to a given level, there should be a similar mandate for developing countries, stating that they should not surpass

said levels. If they do, they should equally be held accountable to pay relative to their contribution to the problem.

At the policy level, it is exactly this dilemma, that newly industrializing nations were not allocated any restrictions on their increasing emissions levels, that lead the United States and Australia to refrain from ratifying the Kyoto Protocol in the first place as they considered it would be an unfair and ineffective in its ultimate goal to reduce global emissions to curb impacts on climate change. Canada's eventual withdrawal from the KP in 2012, as well as Japan, New Zealand and Russia's refusal to take on a second round of reduction targets were also stimulated by a lack of responsibilities delegated to newly developing nations, which they too considered ineffective and unfair. Given how crucial the matter of climate change is, an agreement such as the KP would not have had the amount of resistance it experienced were it to have been considered fair. I would therefore conclude that placing some, albeit limited, responsibilities on newly developing nations would be a fairer and more effective way of distributive justice within the climate change context.

According to Caney's 'poverty sensitive PPP', he requires that 'the poor should not pay' in order to ensure fairness and that this can be mitigated by those with the ability to pay. He reasons that once industrializing nations have emerged from poverty, they could then be held responsible for their cumulative share of the emissions contributing to climate change. Wesely & Peterson (1999, p192) rightfully critique the KP for failing to include this in the agreement. However, what Caney fails to address is what level of industrialization and which effective standard of living should be reached in order for constituents to be considered ready and able to bear the burdens of climate change. On sufficientarian grounds I agree that there should be consideration for the plight of the poor and hence a distinction between the restrictions or burdens placed on the least developed countries (LDC's) of the world such as Somalia or Nepal, in contrast to countries such as China and India which have already experienced considerable economic and industrial growth in the last decades. Nevertheless, it is similarly impossible to group China and India with industrialized nations such as the United States and Germany and have them bear similar burdens.

Moreover, similarly to how authors like Shue and Neumayer agree that we cannot ask too much of the global poor, it would be asking too much of the global rich that simply because they have relatively more disposable resources their responsibilities for all the remaining costs of an

ever increasingly polluting developing world should continue to grow. Furthermore, this burden could become too great to bear without impairing currently wealthier nations. In establishing a fair distribution of the responsibilities associated with climate change, it is imperative that clear guidelines are set for developing nations too to ensure effective and fair climate change mitigation efforts.

5.1.3 Omitting the duties of beneficiaries

Perhaps the most important conclusion that I have raised in the previous subsections is that combining the PPP with the APP in the forms suggested by Caney and Shue would be too morally demanding of those with the ability to pay, especially when the PPP limits liability only to the pollution that has occurred since 1990 onwards. Simply put, I consider it unfair to attribute responsibility over all historical emissions and the unmitigated rising emissions of the developing world to those with the ability to pay. This conclusion stems from the fact that there are other actors, which could be attributed with the moral responsibilities, which are being let off the hook with regards to their duties to bear the costs of mitigating and adapting to climate change.

Assuming that it is wrong to benefit from activities that have caused harm on to others, then beneficiaries of past pollution, which has contributed to the cumulative emissions in the atmosphere that are giving rise to climate change, should bear some responsibility over the costs of climate change. Where Caney's second amendment to the APP incorporates elements of the BPP, in that it is sensitive to whether a state's wealth was accrued unjustly, I argue that lexical priority should be given to the BPP prior to applying the APP, given that more responsibility should be allocated to those who at least have a causal relationship to the harm resulting from climate change. Given that they are not the perpetrators themselves, I argue that they should be held accountable to a lesser degree than those who have contributed to the problem directly, yet more so than those who simply have the ability to carry the costs, as asserted by Caney and Shue.

5.2 Combining the PPP and BPP

In the previous section I provided an extensive critique of a supplementing the PPP with the PPP. Another alternative to addressing the shortcomings of the PPP is to supplement it with the BPP. Scholars such as Grosseries (2004) and Page (2012) suggest that the BPP provides an adequate and fair solution distributing the remaining duties that are unattributed under the PPP.

Both scholars suggest an amendment to the BPP ensuring that 'no debilitating costs' would be incurred by beneficiaries in an attempt to address some of the shortcomings raised in chapter 4 (Grosseries 2004: p47, Page 2012: p318).

In this section I will therefore address the combination of their amended version of the BPP as combined with the PPP in order to establish whether this provides a better account of the responsibilities associated with climate change than the combination of the PPP with the APP discussed in the previous section. However, even when taking the combined and amended versions of these principles suggested by both authors, below I elaborate why in my view, certain issues remain in successfully distributing the costs associated with climate change as elaborated below. Some arguments which I have brought forth in the previous section such as the 1990 cut-off point, as well as those pertaining to developing nations also apply to a combination of the PPP and the BPP, here I will only elaborate on novel arguments.

5.2.1 Limitations of combining backward looking principles

Firstly, both the PPP and the BPP are backwards looking principles in that they both aim to allocate responsibilities based on calculations deriving from the cumulative pollution that has contributed to the problem of climate change to date. However, given that the activities that contribute to increasing levels of GHG emissions in the atmosphere won't be resolved overnight and polluting activities will continue to add to the problem of climate change one also needs to attribute responsibilities over future emissions. Neither combinations of the BPP with the PPP presented by Page or Grosseries provide an adequate forward-looking solution to distributive justice within the climate change context.

Secondly, an important critique against the BPP raised in chapter 4, is that it results in chronological unfairness, which holds that the BPP would attribute excessive costs and burdens on those states that have benefitted from past pollution because it is applied only on beneficiaries alive today, and not on all beneficiaries over time. Grosseries provides an amendment or provision to the BPP dubbed the 'no debilitating cost proviso' (Grosseries, 2004: p47), which determines that "states can only be asked to surrender benefits that actually possess and can be surrendered without significant harm to their citizens or to the survival of just institutions" (Page 2012: p318). Where in my view, this provision is important in ensuring fairness toward beneficiaries in that they should not be overburdened to the extent their wellbeing is affected, applying such a proviso would limit the burdens that can be distributed amongst beneficiaries. If

the applicability of the BPP is limited, then even when combined with the PPP, it will also fall short in fully distributing the costs of past emissions that contributed to climate change amongst the available parties.

Where the BPP looks retrospectively at states' levels of emissions in the past, and the benefits said states have enjoyed as a result thereof (Page 2012: p307), the APP is forward looking dictating that those states that are financially able to contribute to mitigation and adaptation efforts should do so. Taking into account that lexical priority should first be given to those who contributed to the problem first and second to those who have benefited from harm, one option would be to allocate the remainder of the burden to those with the ability to pay.

5.2.2 Dealing with states with an inability to pay

Where the combination of the PPP with the APP failed to account for the beneficiaries, the combination of the PPP with the BPP falls short in explaining how to distribute the responsibilities for activities emerging from those states that don't have the ability to pay. In fact, all of the scholars presented in this paper have difficulty attributing responsibilities to developing nations, for a variety of reasons, such as that they should be allowed to develop unhindered for egalitarian or sufficientarian reasons. Neither of the combinations of the BPP and PPP as presented by Grosseries or Page, accounts for who should take responsibility for the costs arising from past pollution of nations that cannot afford to bear mitigation or adaptation costs. Nor do their combination of principles provide a solution to the emissions arising from the increasing emissions from developing nations as they set forth on the path to industrialization. If these principles are not supplemented with an additional principle a portion of the costs would remain unallocated to any given party, and those harmed by climate change could be left without restitution, which hardly seems fair.

In failing to allocate duties or limitations to developing nations, neither Grosseries nor Page provide a solution as to what should be done with the rising emission levels of developing nations, which if left uncontrolled, will further exasperate the climate change problems in the future. Given our current knowledge of the threats of allowing emissions rise uncontrolled, it would be prudent to take a precautionary approach rather than allowing emissions of developing nations to further exasperate the problem. Only addressing the costs that arise from those emissions once they have accrued over time would be irresponsible and arguably more costly. Where developing nations should not be restricted in their ability to grow, they should be aided

to grow cleanly rather than allowing growth by way of excessive pollution and then later attempting to mitigate its negative effects.

Given this line of reasoning, I would argue that it is not unreasonable to place some duties, although less stringent, on developing nations. Similar to that elaborated under 5.1.2, a solution could be to instill duties on developing nations not to increase their emissions past a 'safe' level by developing cleanly and including the APP as the third principle of distributive justice enshrining duties to those with the ability to pay to ensure that environmentally friendly technologies are researched and disseminated to developing nations in order to ensure that newly industrializing nations don't follow the same destructive path of industrialized countries.

5.3 Proposing a combination of principles

As has been discussed in the previous two sections of this chapter, fault can be found both in combining either the APP or the BPP with the PPP alone. Furthermore, I have demonstrated why I continue to have reservations about the amended versions each of these combined principles even in the amended forms suggested by different scholars, such as, for example, the historically and poverty sensitive PPP. The amended and combined principles addressed above tackle some of the more convincing critiques of each of the principles neither combination can fully account for a fair distribution of the costs associated with climate change. Given these shortcomings in each of the individual principles, I agree with Page, in that "only a principled and philosophically robust reconciliation of at least three of these ('contribution to the problem', 'ability to pay' and 'beneficiary pays') can generate a satisfactory mix of theoretical coherence and practical application" (Page, 2008: p556).

Nevertheless, Page falls short in describing how the problems associated with each of these principles should be mitigated, what amended form they should take and in which lexical priority they should be listed in order to be philosophically robust. In my analysis, a combination of the three principles including certain personal amendments to each of the principles would result in the fairest and most complete distribution of burdens associated with mitigating climate change.

It is essential that ascending priority be given to the principles in order to adequately distribute the burdens. Firstly, one must apply the PPP, given that this principle ascribes duties to those most directly accountable for climate change, and hence the harms caused as a result

thereof. Given the argumentation presented in the previous subsections of this chapter, the principle must be both forward and backward looking:

1. All states, irrespective of their development status, must agree limiting their emissions to a specific quota on a per capita basis.
2. Those states that have exceeded, or will exceed their emissions quotas, notwithstanding emissions during the period dating back to the 1950's, should endeavor to reduce their emissions to the same quota mentioned under 1.
3. Those states that have exceeded their emissions quotas should bear the burden of the costs associated with mitigating and adapting to climate change in proportion to their excess emissions.

Secondly, where historical emissions were accrued prior to the 1950's, which are not accounted for under the aforementioned three elements of the PPP, the BPP would take effect. The BPP should be given priority over the APP in that beneficiaries have a more direct causal link to the harm caused by climate change, whereas it should come secondary to the PPP because those principles have the most direct link to the harm caused by climate change.

4. States which have benefitted from past pollutions should contribute to mitigation and adaptation efforts proportionately to the benefits they incurred and the quantity of emissions that lead to these benefits (dating between the period of 1750 and 1950), but these costs should not be debilitating.

Third and lastly, given that the PPP and the BPP are not able to distribute full responsibility of the costs associated with climate change, those with an ability to pay bear the following duties:

5. Those with the greater capacity and disposable wealth are morally obligated to contribute to the remainder of the costs of mitigating and adapting to climate change, especially in promoting R&D of environmentally friendly technologies and disseminating these to developing nations.

Conclusion

This paper has examined the three most frequently addressed principles of distributive justice applied for the burdens associated with climate change in detail along with several adjusted versions of these principles proposed by different political philosophers. I have presented the difficulties and strengths associated with each of these individual principles and alternatives. Attempting to answer the question of *which of the 3 principles of distributive justice, or combination thereof, best accounts for a just distribution of the responsibilities and duties states have to mitigate and adapt to the burdens associated with climate change* remains challenging. Nevertheless, as argued in this paper, the most persuasive account for distributing responsibilities associated with climate change stems from a combination of adjusted versions of the PPP, the BPP and the APP as listed in the last section of this paper.

Although with this paper I have attempted to provide an as comprehensive as possible overview of the debate on the principles of distributive justice in the climate change context, given the novelty of the philosophical debate on the topic further research should be stimulated of each of the three principles of distributive justice in the climate change context. Given the topic is relevant in continued policy development at the international level, in order to reach any consensus on what the most adequate and fair manner of distributing responsibilities among states for the costs associated with climate change continued research would be highly advisable. As such, the proposal made in the last section of chapter 5 should also be held under the microscope and thoroughly scrutinized and critiqued in order to ascertain whether it adequately proposes a fair distribution of the costs and burdens of climate change.

Bibliography:

Adger, W.N., Nicholson-Cole, S. (2011). 'Ethical dimensions of adapting to climate change-imposed risks' in 'The Ethics of Global Climate Change', Cambridge University Press

Allen, M.R., Lord, R. (2004). The blame game: who will pay for the damaging consequences of climate change? Nature, 432, 551 – 552.

Arrhenius, S., (1896). On the influence of Carbonic Acid in the Air upon the Temperature of the Earth. Astronomical Society of the Pacific

Baatz, C. (2013). Responsibility for the past? Some thoughts on compensating those vulnerable to climate change in developing countries. Ethics, Policy and Environment, 16(1): 94–110.

Butt, D. (2007). On benefiting from injustice. Canadian Journal of Philosophy, 37(1): 129–152.

Butt, D. (2009). Rectifying International Injustice – Principles of Compensation and Restitution between Nations. Oxford: Oxford University Press.

Butt, D. (2012). Doctrine quite new and altogether untenable: Benefit, obligation, and the wrongful and non-wrongful actions of others. In: the Uppsala forum workshop on benefiting from injustice.

Blake, M., and Smith, P. T. (2015) "International Distributive Justice", *The Stanford Encyclopedia of Philosophy* (Spring 2015 Edition), Edward N. Zalta (ed.), URL = http://plato.stanford.edu/archives/spr2015/entries/international-justice/ .

Brock, G. (2015) "Global Justice", The Stanford Encyclopedia of Philosophy (Spring 2015 Edition), Edward N. Zalta (ed.), URL = http://plato.stanford.edu/archives/spr2015/entries/justice-global/

Brooks, T. (2012). Climate Change and negative duties. Politics: 32(1) 1-9

Caney, S. (2005). Cosmopolitan justice, responsibility, and global climate change. Leiden Journal of International Law,18, 747-75.

Caney, S. (2006). Cosmopolitan justice, rights, and climate change. Canadian Journal of Law and Jurisprudence, 19 (2), 255-78.

Caney, S. (2006). Environmental degradation, reparations and the moral significance of history. Journal of Social Philosophy, 37(3): 464–482.

Caney, S. (2009). Justice and the distribution of greenhouse gas emissions. Journal of Global Ethics, 5 (2), 125-46.

Caney, S. (2010). Climate change and the duties of the advantaged. Critical Review of International Social and Political Philosophy, 13 (1), 203-28.

Gardiner, S. (2004). Ethics and global climate change. Ethics, 114 (3), 555–600.

Gardiner, S. (2006). "A Perfect Moral Storm: Climate Change, Intergenerational Ethics and the Problem of Moral Corruption", Environmental Values,15: 397–413

Gosseries, A. (2004). Historical emissions and free-riding. Ethical Perspectives, 11(1): 36–60.

Grubb, M. (1995). Fair Weather: Ethics and the International Debate on Climate Change, International Affairs (Royal Institute of International Affairs 1944-), Vol 71, No.3, Ethics, the Environment and the Changing International Order, 463-496

Huseby, R. (2015). Should the beneficiaries pay?, Politics, Philosophy & Economics, Vol.14 (2), 209-225

Jamieson, D. (2001). Climate change and global environmental justice. In: Miller, C.A., Edwards, P.N. (Eds.), Changing the Atmosphere: Expert Knowledge and Environ-mental Governance. The MIT Press, Cambridge, MA, pp. 287 – 307.

Lamont, J. and Favor, C. (2014). "Distributive Justice", The Stanford Encyclopedia of Philosophy (Fall 2014 Edition), Edward N. Zalta (ed.), URL = http://plato.stanford.edu/archives/fall2014/entries/justice-distributive/

Miller, D. (2001). Distributing responsibilities. Journal of Political Philosophy, 9(4): 453–471.

Miller, D. (2009). Global justice and climate change: how should responsibilities be distributed. Parts I and II. The Tanner Lectures on Human Values, 28: 119–156.

Muller, B. (2001). Varieties of distributive justice in climate change: an editorial comment. Climatic Change, 48, 273–288.

Neumayer, E. (2000). In defense of historical accountability for greenhouse gas emissions. Ecological Economics, 33, 185 – 192.

OECD (1972). Recommendation of the council on guiding principles concerning international economic aspects of environmental policies. May. Council Document no. C(72)128. Paris: Organization of Economic Cooperation and Development.

Paavola, J.T., Adger, N.W. (2006). Fair adaptation to climate change, Ecological Economics, 56, 594-609

Page, E.A. (2006). Climate change, justice and future generations, Cheltenham: Edward Elgar.

Page, E.A. (2007). Fairness on the day after tomorrow: reciprocity, justice and global climate change. Political Studies, 55 (1), 225–242.

Page, E.A. (2008). Distributing the burdens of climate change. Environmental Politics,17(4): 556–575.

Page, E.A. (2010). Distributing atmospheric burdens: a conjunctive approach. In: the 40th SWEPSA conference Gothenburg

Page, E.A. (2012). Give it up for climate change: A defense of the beneficiary pays principle. International Theory, 4(2): 300–330.

Paterson, M. (2001). Principles of Justice in the Context of Global Climate Change, in Luterbacher, U., and Sprinz, D., (eds), International Relations and Global Climate Change. Cambridge, MA: MIT Press

Risse, M. (2008). Who Should Shoulder the Burden? Global Climate Change and Common Ownership of the Earth, Faculty Research Working Papers Series, Harvard Kennedy School.

Roberts, M.A., (2015). "The Nonidentity Problem", The Stanford Encyclopedia of Philosophy (Winter 2015 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/win2015/entries/nonidentity-problem/>.

Sachs, B. (2014). The Relevance of Distributive Justice to International Climate Change Policy, Ethics, Policy & Environment, 17:2, 208-224

Singer, P. (2002). One World: The ethics of globalization, Yale University Press

Shue, H. (1999). Global environment and international inequality, International Affairs, 75 (3), 531-545

Sterba, J.P. (2006). 'Justice' in 'Political Theory and the Ecological Challenge', Cambridge University Press.

Tollefson, J. & Gilbert, N. (2012). "Earth Summit: Rio Report Card", Nature 6 June

WCED 1987. Our Common Future, United Nations General Assembly, Report of the World Commission on Environment and Development, http://www.un-documents.net/our-common-future.pdf

Wiegandt, E. (2001). Climate Change, Equity and International Negotiations, in Luterbacher, U., and Sprinz, D., (eds), International Relations and Global Climate Change. Cambridge,

MA: MIT Press

Wissenburg, M. (2006).'Liberalism' in 'Political Theory and the Ecological Challenge', Cambridge University Press (2006).

Environmental Ethics: Distributive Justice in the Context of Climate Change

GRADEMARK REPORT

FINAL GRADE

/10

GENERAL COMMENTS

Instructor

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15

PAGE 16

PAGE 17

PAGE 18

PAGE 19

PAGE 20

PAGE 21

PAGE 22

PAGE 23

PAGE 24

PAGE 25

PAGE 26

PAGE 27

PAGE 28

PAGE 29

PAGE 30

PAGE 31

PAGE 32

PAGE 33

PAGE 34

PAGE 35

PAGE 36

PAGE 37

PAGE 38

PAGE 39

PAGE 40

PAGE 41

PAGE 42

PAGE 43

PAGE 44