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The Construction of a Sustainable Development in Times of Climate Change

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Abstract

This dissertation is a contribution to the debate about 'climate justice', i.e. a call for a just and feasible distribution of responsibility for addressing climate change. The main argument is a proposal for a cautious, practicable, and necessary step in the right direction: given the set of theoretical and practical obstacles to climate justice, we must begin by making contemporary development practices sustainable. In times of climate change, this is done by recognising and responding to the fact that emissions of greenhouse gases, with climate change as their result, are an immanent threat to any reflectively embraced development project.

In the universal pursuit of progress, the basic needs of both present and future people are put at risk. Even so, a political stalemate and a business-as-usual attitude prevail. The situation is paralysed by an uncertainty about the exact impacts of choices made and by the reasonable disagreement of modern societies. The result is passiveness, and the passing on of a slowly and indiscernibly growing problem to future generations.

This dissertation conveys a crucial message about the need to make our development sustainable. Instead of delaying action through trying to resolve the intractable epistemic and normative uncertainty fully, the focus should be on vindicating already shared points of practical convergence. On the constructivist method here adopted, the task is to characterise the agent and the situation faced from a practical and first-person point of view. More specifically, to specify the practical problem climate change gives rise to; the moral importance of needs (chapter three); how a principled priority of basic needs can be defended (chapter four), intergenerationally (chapter five) and internationally (chapter six); and what natural and social limits there are to development (chapter seven). These conceptions narrow the practice of development in the present context: it can be concluded that development must not risk the basic needs of anyone implicated. This common ground brackets off disagreement irrelevant to the urgent need to act, and so brings together otherwise deeply divided agents. A sufficientarian basic needs-principle, as the focus of an overlapping consensus, is practicable and anticipatory in the disuniting moral conundrum of climate change.

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CONTENTS

Chapter 1

Introduction. From the Empirical to the Normative

> *The city was desolate. No remnant of this race hangs round the ruins, with traditions handed down from father to son and from generation to generation. It lay before us like a shattered bark in the midst of the ocean, her mast gone, her name effaced, her crew perished, and none to tell whence she came, to whom she belonged, how long on her journey, or what caused her destruction...Architecture, sculpture, and painting, all the arts which embellish life, had flourished in this overgrown forest; orators, warriors, and statesmen, beauty, ambition, and glory had lived and passed away, and none knew that such things had been, or could tell of their past existence...Here were the remains of a cultivated, polished, and peculiar people, who had passed through all the stages incident to the rise and fall of nations; reached their golden age, and perished...We went up to their desolate temples and fallen altars; and wherever we moved we saw the evidence of their taste, their skill in arts.*
>
> — John Stephens, *Incidents of Travel in Central America, Chiapas and Yucatán, Vols. 1 & 2* (1841).[1]

1.1 Prelude

Climate change may be the most difficult problem that the international community has ever faced. While powerful decision makers are stuck in protracted negotiations, the problem is aggravated by yet more emissions of greenhouse gases being poured into the atmosphere, day by day, hour by hour. On the most general level the problem is clear: the stock of

[1] Quoted from Jared Diamond's *Collapse*, p. 158.

carbon dioxide and similar heat trapping gases in the atmosphere are warming the planet and giving rise to unprecedented changes in the complex climate system. The effects will be felt already within the lifetime of many people of the present generation, and even more so by people of subsequent generations. There is little doubt that the resources used to fuel economic growth and their resulting byproducts create risks for the future; those associated with climate change are most likely unacceptable. What other conclusion may be inferred than that it is unethical to knowingly expose future people – our children and grandchildren – to the dangers which stem from choices made today? How can there be a place for cool-headed philosophical thinking when the burning issue of climate change calls for urgent action? Are we fiddling while Rome burns?

No-one would seriously propose jettisoning critical and reflective perspectives even in times when the seas are high and frightening, but the specific situation of climate change could still partly explain the relatively meagre philosophical work done. The following quote from Brian Barry captures a feeling of hopelessness with regards to the situation and the superfluity of philosophy: "If I am right about this, it explains the feeling among practitioners that philosophical analyses have little relevance to their concerns. For whether we make the demands of justice more or less stringent, it is going to demand more than is likely to get done in the foreseeable future" (Barry, 2003 [1997], p. 498). Maybe that is too gloomy though. Stephen Gardiner has suggested a rather different explanation of the neglect of climate change by moral philosophers[2]: "that the study of climate change is necessarily interdisciplinary, crossing boundaries between (at least) science, economics, law, and international relations"(Gardiner, 2010 [2004], p. 3).

I shall take these two suggestions as a challenge to be worked round. The motivation for writing this thesis is both related to a belief in the need for more interdisciplinary work on complex social problems and in the need to maintain hope in the face of despair. Although it is thrilling to imagine it to be a philosophical task of synthesising points from disparate subject disciplines, such thoughts naturally are naïve. However, there is undoubtedly something unifying about a philosophical project, which could promote bridge building if successfully done. But, there are less remote, and more realistic, reasons for this study too. Much of the current project should be able to stand on its own, as a philosophically analytic project. Now this study is not generally about the normative dimension of climate change, but more narrowly so about

[2]A few rare exceptions should be noted though. Gardiner mentions a few early contributions, such as Jamieson (e.g, 1991, 2010 [1992]), Broome (1992), and Shue (e.g., 2010 [1993]) *et al.*. Today one could add a few other names, such as Peter Singer, Simon Caney, and Gardiner himself (see Gardiner et al., 2010).

the idea of sustainable development. To present sustainable development as a response to climate change is not uncommon, but still only one of a range of possible responses (most of these alternatives will be presented as contrasting material in the study). At the same time the study of climate change politics is widened by this conception. Sustainable development figures widely in policy discussions, not only those related to climate change.[3] The extended use of the term sustainable development (applied to everything from construction work to corporate management) can cause confusion. This will be somewhat mitigated by the fact that it will only be studied as a rather specific moral and political idea. This relates to the second motivation: I believe that at the core of sustainable development lies hope and optimism for the future, and that this is desperately needed in times of climate change.

The appeal of the philosophical theses contained in the concept of sustainable development has to do with the transition from the empirical to the normative. In the final chapter of this thesis there will be an attempt to give a positive argument for why these features of sustainable development place it in a unique position to provide a fitting response to climate change. One could formulate this idea as a kind of hypothesis: *Given that the problems raised by climate change essentially involve a proper mixture of both natural and social perspectives, sustainable development is a solid starting point in the search for reasons to deal with this complex problem.* In the remainder of this introduction, I will attempt to set the scene for the work by briefly explaining the empirical foundation of climate change and begin to sketch of an argument for why usual responses to climate change politics are unsuccessful. The shortcomings of standard approaches are mainly the following: first, concealed or insufficiently argued for ethical standpoints lurking in proposed arguments; second, a failure to account for the reasonable normative disagreement regarding the distribution of responsibility for addressing climate change. A firm contention of this thesis is that in order to motivate climate change action we must recognise that the problem is one in which people with different world-views and values will reasonably disagree about any distribution based on a comprehensive moral, religious or scientific doctrine. The basis for action must be one in which such free and critical people can freely accept in view of their own perspectives.

The rest of the thesis will have the following structure. In chapter two, the conviction just mentioned leads towards the construction of a sustainable development as a widely shared problem-formulation and site for meaningful value contestation. I will argue that the concept of a sustainable development

[3]The search result in Google for 'sustainable development' (of 117 000 000 hits, 08.09.11; 313 000 000 hits 22.02.13) tells of the vast amounts of usages.

is a mundane and generally accepted approach, although it holds a promise for radically addressing the injustices that relate to climate change. As the concept has a political, rather than philosophical, history, we must be careful with this reconstruction; I will nonetheless – and hopefully not insensitively – argue that there is a philosophically interesting core here. If it can be accepted that the very engagement in development activities gives rise to a platform for meaningful exchange, and hence justification of, normative arguments, we shall be content. The subsequent chapters of the thesis build on this hypothesis. The objective, I take it, is to specify conceptions of persons and situation in order to make concrete the various values and normative judgments at conflict in future-oriented activities. More schematically, the task is to say what it is to be an acting and planning human being in times of climate change. The main conflict in development practices, I contend on basis of the discussion in chapter two, is that between different conceptions of 'needs' and how they should be prioritised in relation to other values. Chapter three presents an overview of the literature on 'needs' and their normative importance. The task continues in chapter four, where a commonly discussed and much criticised way of prioritising needs, referred to as "sufficientarianism", is discussed. My main argument in these two chapters is that there are morally important differences between different kinds of needs, which makes a principle of precedence (for some over others) reasonable. However, the sufficientarian argument is rightly criticised: it is not the case that we should only care about some specified set of (basic) needs and nothing else, rather that these needs are important in the sense of giving us a non-arbitrary way of braking out of an impasse. Chapters five and six move the discussion towards a more concrete application by trying to specify the situation round climate change further. Chapter five considers the basis of intergenerational climate justice and chapter six the intragenerational distribution of (residual) climate responsibility. The main argument in these chapters is that the situation is such that we can expect much disagreement about any proposal for the distribution of responsibility for addressing climate change, but that a more practical approach – such as the one defended in this dissertation – is a way of taking steps in the right direction in spite of this. Even if we can reasonably disagree about exactly how much we owe to future people in virtue of climate change, or about how residual responsibility should be dealt with, I will argue that we will find reasons for at least taking steps to protect the fulfilment of the basic needs of future people irrespective of this. Finally, chapter seven sums up the preceding discussion and offers an argument in favour of sustainable development as anticipating an ideal form of climate justice.

1.2 The Empirical Ground

The climate is changing all the time and has done so throughout the history of the Earth; a glacial period turns to warmer interglacial periods followed by new glacials. Over the last couple of centuries a new factor has intervened and created a political concern of great magnitude. Human interference in the climate system has created risks of rapid and dangerous climate change. Some have argued that the human being has become a geological actor; that we have entered the 'anthropocene' (Crutzen, 2002).

The foundations of the theory that explains the human impact on global mean temperature, the carbon dioxide theory or the greenhouse theory of climate change, was laid out already in 1896 by the physicist and chemist Svante Arrhenius. He calculated that addition of carbon dioxide into the atmosphere would contribute to an increased global mean temperature. Contrary to the present interpretation of the theory, however, this was seen as an opportunity, something that would postpone the end of the present interglacial period, i.e. the holocene, and the beginning of a feared new ice age. Arrhenius's theoretical position built on facts known from earlier work: that the presence of certain gases in the atmosphere partly explains the global temperature, as Joseph Fourier had argued, and that carbon dioxide was the most important of these, as James Tyndall had shown. At the time, Arrhenius's predictions of the climate sensitivity – i.e. the global temperature resulting from a doubling of carbon dioxide (CO_2) – were widely contested, and continued to be so for quite some time. Up into the mid 20^{th} century the carbon dioxide theory seemed doubtful to most scientists as other explanations of climate variation seemed more convincing. It was hard to imagine that minor contributions of carbon dioxide to the atmosphere could compete with the impacts of orbital changes. Only in the 1960s, as a result of the diligent work of the amateur researcher G.S. Callendar, the scientific community started to take the carbon dioxide theory seriously and to allocate resources to its exploration.

When the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) got together and decided to form an intergovernmental panel on climate change (IPCC) in 1988, the theory had already been firmly established and the need for political communication started to be clear. The panel was assigned the mission to "provide the governments of the world with a clear scientific view of what is happening to the world's climate".[4] Information on climate change from disparate disciplines was to be collected and synthesised in 'policy relevant, but not

[4]See the IPCC webpage for a short history of the panel: http://www.ipcc.ch/organization/organization_history.shtml.

policy prescriptive' assessment reports. The work proceeded in three working groups (WG): WG I assessing the physical basis of climate change; WG II assessing the impacts and means to adapt to these; and, WG III assessing the means to mitigate climate change. In addition, a "task force" was set up to gather the national greenhouse gas inventories. Four reports have been released to date: 1990 (FAR), 1995 (SAR), 2001 (TAR), and 2007 (AR4); and a fifth report (AR5) is expected 2013-14. These comprehensive assessments of the state of art of climate science have a great importance in providing input to the political discussion of climate change.

The synthesis report of AR4 states that: "Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level" (Core Writing Team, Pachauri, R.K and Reisinger, A., 2007, p. 30). The warming trend over the period 1906-2005 is reported to be 0.74°C (with a possible range of 0.56°C to 0.92°C). Moreover, it is a trend that accelerates; the warming over the past 50 years (1956-2005) shows a warming of 0.13 [0.10-0.16]°C per decade, which is nearly twice that for the 100-year trend. It should also be noted that this is the mean warming of the world as a whole described, as a generated average from whether stations, balloons, and satellites. Locally, however, the temperature varies even greater. At higher northern latitudes the warming is, as expected, even higher, for instance the average arctic temperature trend has increased almost twice compared to the world average over the past 100-years. There is also evidence that the oceans, the most important heat uptake, have absorbed as much as 80% of the global warming. Consistent with the warming, accelerating melting is observed for snowy mountain tops at both hemispheres as well as for ice sheets of the Arctic and Greenland. As a result the sea levels are observed to be rising, also consistent with the warming; between 1961-2003 global average sea levels rose by 1.8 [1.3-2.3] mm per year.

The cause of these trends is concluded to be the rising levels of greenhouse gases (GHG) in the atmosphere: "[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations" (Core Writing Team, Pachauri, R.K and Reisinger, A., 2007, p. 39). It is thus concluded with high confidence[5] that *most of the warming observed has its cause in human*

[5]The uncertainties are handled carefully, described in three different approaches, qualitatively and quantitatively. When references are made to levels of confidence it is based on the following scale used by expert judgements to make assessments: very high confidence = at least 9 out of 10; high confidence = about 8 out of 10; medium confidence = about 5 out of 10; low confidence = about 2 out of 10; and very low confidence = less than 1 out of 10.
When references are made to likelihoods (such as "is very likely due to..."), the assessment

activities, in particular the burning of fossil fuel. Apart from that release of CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphurhexafluoride (SF_6) are considered to be the important anthropogenic GHG's. Because these gases are of various potency and duration, CO_2 is sometimes used as a reference for a common metric where these GHG are counted together to get a conception of the total amount of radiative gases in the atmosphere (what is called 'CO_2-eq'). CO_2, however, is the biggest concern as it is the most abundant and long-lived of the anthropogenic GHG's. Although water vapour is even more important in explaining the temperature, it is CO_2 that is the control knob of the variations. The usual way of presenting the concentration thus uses CO_2 as a proxy, measured in parts per million (PPM). The present (i.e. June, 2013) count of CO_2 in the atmosphere is 399.89 PPM and the annual rate of increase over the last 10 years is of 2.07 PPM per year.[6] The pre-industrial level of CO_2, which is often used as a reference point, was 280 PPM.[7]

The traditional way of measuring the impact of the rising levels of GHG is through what is called 'climate sensitivity', i.e. the equilibrium temperature response of the planetary system to a doubling of pre-industrial atmospheric concentrations of CO2. In order to arrive at such measurements general circulation models (GCM) are needed to calculate the flows of the climate system. In a well-known meta-study from 1979, Charney et al. concluded that "the most probable global warming for a doubling of CO_2 to be near 3°C with a probable error of ± 1.5°C." (1979). However, due to the complexity of the climate system and limited computer power, these figures was still very rough and highly contested. In particular, these early models had great difficulties in calculating the effects of oceans and clouds on the temperature. But as the scientific studies evolved and better input was provided by oceanography and paleoclimatology, many of the controversies and uncertainties were resolved and the models became more realistic. GCM's could with greater precision replicate historical climate changes as well as explaining the present climate, although many of the problems of estimating future climate persisted. The

uses expert judgment together with statistical analysis, and the likelihoods are represented as follows: virtually certain >99%; extremely likely >95%; very likely >90%; likely >66%; more likely than not > 50%; about as likely as not 33% to 66%; unlikely <33%; very unlikely <10%; extremely unlikely <5%; exceptionally unlikely <1%.

[6]When I started writing this thesis, in April 2009, the sum of CO_2 in the atmosphere was 389.44 PPM. It has thus risen by 10.45 PPM during these four years, or roughly with 2.6 PPM per year.

[7]See: http://co2now.org/, who get their information from Mauna Loa Observatory, Hawaii. This observatory was set up by Charles David Keeling (hence called the 'Keeling curve') in the 1950's and has since then measured the concentration of CO_2 in the atmosphere.

recurring problem has been the role of clouds in the climate system; it has been unclear to what extent different clouds will form as a result of temperature changes, and whether that will have a negative or positive effect on the temperature (on the one hand, clouds traps heat in the atmosphere, on the other hand, they prevent sun light from entering into the atmosphere due to the so-called 'albedo effect'). In the latest IPCC report, it is stated that the "climate sensitivity is *likely* to be in the range of 2 to 4.5°C with a best estimate of about 3°C, and is *very unlikely* to be less than 1.5°C" (Core Writing Team, Pachauri, R.K and Reisinger, A., 2007, p. 38).

However, these figures from IPCC have been accused of being too conservative. James Hansen et al. have argued that the climate sensitivity measurements following the tracks of Charney's study, including the ones reported in IPCC, exclude what they call 'slow feedback mechanism': "Charney defined an idealized climate sensitivity problem, asking how much global surface temperature would increase if atmospheric CO_2 were instantly doubled, assuming that slowly-changing planetary surface conditions, such as ice sheets and forest cover, were fixed." (Hansen et al., 2008, p. 218). With the additional slow feedback mechanisms, the climate sensitivity turns out to be doubled, 6°C rather than 3°C, they argue. It all depends on the effects of the various negative and positive feedback mechanisms of the climate system. It is, for instance, well-known that the most important greenhouse gas is not a direct result of anthropogenic emissions, it is water vapour. A paradigmatic example of a positive feedback mechanism is thus when the oceans warm, which both causes the release of more water vapour and the decrease of ocean carbon uptake, contributing to further warming (and even more water vapour and less carbon uptake, etc.). During the last decade scientists have started to look in to less well-studied examples of such feedback mechanisms to make the models even more realistic. One such is the carbon stored in soils in the form of peat; decayed vegetation matter. As the temperature increases on land, bacteria will more efficiently decompose these huge stocks of carbon, resulting in the release of vast amounts of carbon dioxide into the atmosphere. In an article from 2000, Peter Cox et al. tried to model this feedback mechanism and arrived at the conclusion that after 2050 the terrestrial biosphere would shift from being a carbon sink to a source, resulting in 250 ppm of additional CO_2 in the atmosphere by 2100 as compared to then existing models (Cox et al., 2000).

There are also negative feedback mechanisms that need to be accounted for. A well-known phenomenon is the lowering of the temperature following volcanic eruptions. From the early 20th century, scientists also started to connect other events to local and regional cooling; observations of the release of dust from deserts and smoke from forest fires were hypothesised to have

such an effect. The explanation supposedly was that the particles from these practices blocked the sunlight from entering into the atmosphere. The calculation of the exact effect of these aerosol particles on the climate, however, has been quite complicated. In addition to the cooling, they also have a warming effect, as they trap heat in the atmosphere (similar to the other GHG's) and give rise to new clouds. From the 1970s onwards scientists have tried to calculate whether aerosols would on balance have a negative or positive effect on world temperature. It has became more and more clear that it is not the visual dust and soot that account for the biggest impact on the climate, rather it is the tiny particles of sulfate (in particular sulfur dioxide SO_2). At the end of the 20th century the scientific models began to converge on aerosols having a net cooling effect. In the terminology of IPCC, this is expressed, as having a 'negative radiative forcing'.[8] The net effect of the aerosols is said to be a -0.5 [-0.9 – -0.1] W/m^2, which could be compared with the effect of changes in solar irradiance since 1750 of +0.12 [+0.6 – +0.30] W/m^2, and the radiative forcing of CO_2, CH_4 and N_2O of +2.3 [+2.1 – +2.5] W/m^2. Although this way of presenting the driving forces of climate change may not be directly accessible, it can at least be seen that the accumulated effect of these factors is warming. It should also be clear that the warming would have been even greater had some of it not been offset by aerosols. This means that some pollution restriction policies, implemented in efforts to reduce the health issues related to smog and dust, may induce further warming.

As the climate models have included more and more of the driving forces of the climate system, their predictions have also become more reliable. It is now clear from the modelling work that the observed temperature increase could not be explained but by anthropogenic GHG's; models run with only natural forcing have not been able to reproduce the warming trend (Core Writing Team, Pachauri, R.K and Reisinger, A., 2007, p. 39). In sum, existing climate models together with paleoclimatic data gives robust evidence of an ongoing change in the world mean temperature as a result of human activities.[9] There are remaining uncertainties, but the overall picture is clear. One can also conclude that the major uncertainties seem to be related to the upper limit of the warming – is the climate sensitivity about 3°C or rather much higher due to the slow feedback mechanism? – whereas the minimum warming expected

[8]The common metric of the different drivers of climate change used by IPCC is 'radiative forcing', a measurement of externally imposed perturbation in the energy budget of the Earth, expressed in watts per square meter (W/m^2).

[9]According to the definition of climate change adopted by UNFCCC, it is defined as being anthropogenic; whereas the definition of IPCC involves both anthropogenic and natural causes of the changing climate.

from a doubling of CO_2 is "very unlikely" to be wrong (Core Writing Team, Pachauri, R.K and Reisinger, A., 2007, p. 38).

These warming trends considered by themselves may not seem to warrant massive theoretical and political measures. In particular it may seem so from the perspectives of the colder regions of the world (e.g. Russia and Scandinavia), where a few degrees warming may seem to improve the opportunities for agriculture, etc.. This probably is a mistaken verdict though. First of all, it should be noted, it is not necessarily the warming *per se* that is the concern, but rather the rapid *change*. The core problem is that nature, animals and human beings cannot sufficiently adapt to the new conditions (Gardiner, 2010 [2004], p. 4). For some ranges of variations measures of adaptation are only politically unavailable, whereas for others they are simply impossible. Secondly, the concern is that the continuation or acceleration of these trends might lead to much worse future living conditions, some not even habitable at all. But here we arrive at another challenge in assessing the danger of climate change, perhaps the biggest uncertainty of all; namely, how much GHG will there be in the atmosphere in the future? The primary sources of the GHG are industry, energy, transport, the use of cement for buildings, deforestation, and agriculture. But how much will be emitted from the burning of fossil fuel and how much will stay in the atmosphere as a result of land use change over the coming decades?

Since predictions are hard to make, IPCC uses a set of (40) different scenarios (called 'SRES') with different mixes of the main driving forces of GHG emissions: development paths with different economic, demographic, and technological variables. One should note that these are scenarios, rather than predictions, and as such do not have likelihood assigned. Any scenario is as likely as any other without this information; but *given* a specific scenario, it is possible to calculate the most likely temperature increase. The scenarios stretch from year 1980-99 to 2090-99. They are divided in to four "families": A1, A2, B1, and B2. The "best" case scenario (B1), which assumes a global population that peaks in mid-century and rapid changes towards a more service and information-based economy, predicts a temperature increase of 1.8°C (with a likely range between 1.1°C and 2.9°C). The "worst" case scenario (A1F1) it predicts a temperature increase of 4 [2.4-6.4]°C. These 40 scenarios gives us, the widely cited, temperature span of 1.1-6.4°C as an informed guess about the possible temperature a century ahead in time. The interpretation should caution that some variables are harder to estimate, for instance, how much technological progress that can be expected. One should also note that no additional climate policies are assumed under any scenario.

Despite the uncertainties, there are some more stable and certain predictions:

> For the next two decades a warming of about 0.2°C per decade is projected for a range of SRES emissions scenarios. Even if the concentrations of all GHGs and aerosols had been kept constant at year 2000 levels, a further warming of about 0.1°C per decade would be expected (Core Writing Team, Pachauri, R.K and Reisinger, A., 2007, p. 45).

A reference scenario, thus, is if emissions are kept constant at year 2000 levels, then a temperature increase of 0.6 [0.3-0.9]°C is the best estimate. We can also add the already observed temperature change due to anthropogenic emissions, from 1850 up to where these scenarios start at 1980, which is of 0.5°C. Thus, we know the following: if emissions of GHG would have been stopped at year 2000, we would have expected an anthropogenic impact on the climate system of around 1°C by the end of this century; and that for all ways in which the world could conceivably develop, without any climate mitigation strategies, the impact will at least be a temperature increase of 1.6°C (that is, the lowest possible temperature for the best case scenario, 1.1°C plus the addition of the already observed change of 0.5°C). Now neither of these scenarios seems very likely as the emissions of GHG are constantly increasing. As already reported, the annual rate of increase of CO_2 over the last 10 years is of 2.07 PPM per year. This makes it probable that the temperature increase without any climate mitigation will be substantially higher than the lowest possible in the coming century. The SRES-team deliberately avoided a "business-as-usual"-scenario, for reasons to be discussed below, but it has been given elsewhere. Nicholas Stern, for instance, presents a projection based on extrapolating the observed rising emission trend, on basis of which he suggests an atmospheric concentration of CO_2-eq at 580–630 PPM by mid-century and 800–900 PPM by the end of the century. On a scenario with 850 PPM, Stern continues, there would be a 70% probability that the temperature would stabilise at an increase of 5°C above preindustrial levels (Stern, 2010b, p. 43; Stern, 2010a, p. 26).

It is important to again point out that these figures – even those of Stern – should be thought of as conservative; they do not include the slow feedback mechanisms mentioned earlier. After the latest report from IPCC, in 2007, these worries have been highlighted by many (Lenton et al., 2008; Rockström et al., 2009). Ideas about 'tipping points' in the climate system, similar to the one described above in the quote from Cox have been further developed. This could mean a few things; that the stabilisation points on given emission trends are at much higher temperatures than now envisioned – if, for instance, we cross some tipping point already at a warming of 2°C, it might be the case that the level of GHG that gives us a warming of 2°C really commits us to a warming of 3 or 4°C. Mark Lynas visualises one such worry in the following

quote:

> If [...] we cross the 'tipping point' of Amazonian collapse and soil carbon release which lies somewhere above two degrees, then another 250 parts per million of CO_2 could pour into the atmosphere, yielding another 1.5°C of warming and taking us straight into the four-degree world. Once we arrive there, the accelerated release of carbon and methane from thawing Siberian permafrost will add even more greenhouse gas to the atmosphere, driving yet more warming, and perhaps pushing us on into the five-degree world. At this level of warming [...] oceanic methane hydrate release becomes a serious possibility, catapulting us into the ultimate mass extinction apocalypse of six degrees (Lynas, 2007, p. 252).

It also means that the temperature responses might come much faster, which should make us worry about the possibilities of adapting to such rapid changes.

From the political and moral perspective, the relevant question now is: what is it about these possible temperature increases that we have reasons to worry about? It is to this we now turn. Again, the uncertainties are large in answering this question. The last 100-year trend is the highest temperature in 1300 years, and with a degree more of warming it will be the greatest temperature in a million years. So we need to search for parallels in the geological history of the Earth in order to think about the possible consequences of such temperatures. One common comparison is the Palaeocene-Eocene Thermal Maximum (PETM): "The PETM represents one of the best natural analogues in the geological record to the current rise in atmospheric CO_2 due to burning of fossil fuel" (Higgins and Schrag, 2006).[10] This geological time period, around 55 million years ago, was around 6°C warmer than today. Even if that temperature resulted from much longer periods of warming than the century frames presently discussed, emissions now increase much faster. The important point is that the PETM world is radically different from the one we know and in which human societies have thrived. It is one without polar ice, and thus with sea levels sinking most costal cities around the world; one in which inland areas would experience an even greater warming, of 10°C or more, causing massive increases in the number of heat related deaths and crop failures, expanding deserts, dwindling water sources, and the loss of inhabitable land. Most of the ecosystem functions that enable human societies today would be threatened or already destroyed, which would necessitate massive population movements.

Such worst-case scenarios would also bring about a massive extinction

[10] Quoted from Lynas (2007, p. 204).

of species. In the end-Permian crisis, 251 million years ago, 95 per cent of all life on land and in the sea was wiped out due to the massive release of methane that caused a 6°C warming. Lynas write: "the end-Permian greenhouse probably took at least 10 000 years to play out. We could achieve the same level of warming in a century, a hundred times quicker even than the during the worst catastrophe the world has ever known" (2007, p. 235). And continues: "If we had *wanted* to destroy as much life on Earth as possible, there would have been no better way of doing it than to dig up and burn as much fossil hydrocarbon as we possibly could" (2007, p. 236). Species and biodiversity are immensely important to so many things that we appreciate in our lives; in fact, human beings are essentially dependent on the conditions they provide. Already today the extinction rate of species is accelerating and is now about 1000 times higher than the background rate (Reid et al., 2005). Chris Thomas has argued that over a third of the world species (in absolute numbers, over a million species) would be committed to extinction in a 2°C world in the year 2050. The biologist Edvard O. Wilson (2006) refers to this as the the Eremozoic Era – the 'Age of Loneliness'.

It is not only the nightmare scenarios that should be feared. Already today climate change causes, or at least worsens, problems world-wide. There is evidence that anthropogenic warming has already increased the risk of heat waves and wind patterns (Core Writing Team, Pachauri, R.K and Reisinger, A., 2007, p. 40). It is illustrative to think about the European heat wave of 2003 where the temperature deviation was a warming of 2.3°C: 22 000 – 35 000 people are said to have died that summer directly or indirectly related to the heat wave. WHO have estimated that the number of deaths due to climate change up to the year 2000 was 150 000 (Confalonieri et al., 2007, p. 407). It is also clear that climate change contributes to the spread of deadly diseases, such as malaria, dengue fever and diarrhoeal diseases (Confalonieri et al., 2007, pp. 407ff). Heavier storms due to higher surface ocean temperature can be expected, and might already be being witnessed.

Another worry, which is much less noticed, is that of ocean acidification. As the oceans take on carbon from the air it is dissolved into carbonic acid, and this in turn means that the oceans become acidified. This spells trouble for organisms living in the ocean with calcium carbonate shells, for instance the important plankton that numerous other species feed on. As plankton begins to dissolve their ability to take up carbon will also diminish, which would further increase the atmospheric concentrations. In addition to this, all other species that have carbonic shells will be affected – from oysters to corals.

The issue of rising sea levels is already a reason for concern. Greenland ice sheets contain enough water to raise global sea levels by 7 meters (Lynas,

2007, pp. 64f). There is modelling evidence that the Greenland ice sheets will tip into irreversible melt already at a temperature increase of 1.2°C (due to larger temperature variations at the poles). Perhaps the biggest concern is the melting of ice at the poles and Greenland, which would result in rising sea levels, and in turn, a threat to the existence of some low-lying nations (e.g. the Maldives). With up to 500 000 persons, the atoll nations will in the coming decades need asylum somewhere.

For more than a mild temperature increase, crop productivity will be negatively affected. At 3°C warming, even mid-latitude crops will be negatively affected, due to water shortage. This will result in loss of food security, malnutrition and famines. Another worry is coastal erosions and flooding. The list may be extended much further still. What we know is that the impacts of climate change will be dispersed, both spatially and temporally, and look completely different depending on place.(Core Writing Team, Pachauri, R.K and Reisinger, A., 2007, pp. 48-54).

1.3 The Philosophical Ground

Most of the discussion from the preceding section is based on empirical work, in paleoclimatology, oceanography, and atmospheric physics among other disciplines. Some is more theoretical, in particular the work on climate modelling and scenario making. Against this empirical and theoretical backdrop a set of philosophical questions take form. These are questions of a different and more fundamental kind: about what we can know, what it means to act and how actions and characters can be evaluated. Whether due to contingent or necessary limitations, the world is not fully described by what is called the natural sciences. Regarding the problem of climate change Dale Jamieson puts it as follows:

> The problem we face is not a purely scientific problem that can be solved by the accumulation of scientific information. Science has alerted us to a problem, but the problem concerns our values. It is about how we ought to live and how humans should relate to one another and to the rest of nature. These are problems of ethics and politics as well as problems of science. (Jamieson, 2010 [1992])

There are experiences, phenomenologies, languages, conceptions, values, reasons, ideologies, norms and theoretical constructs that mediates the world to us as human beings. "The idea of climate change means different things to different people in different contexts, places and networks", as Mike Hulme puts it and hence, "[t]here is no single perspective or vantage point from

which this kaleidoscopic idea of climate change can be understood" (2009, p. 325). We can only sensitively relate to these various intermediaries to approximate an understanding. This is also part of the subject matter of philosophy as well as of this thesis. We need more than a scientific description of the phenomenon of climate change in order to fully understand it and, even more so, to be able to relate to and act against it.

The philosophical questions raised by climate change concern both the scientific study of it as a natural phenomenon and the evaluation of its expected implications and the possible responses to them. Epistemic and ethical norms must be scrutinised in order to understand the social and political dimension of climate change. This is also recognised by many scholars and practitioners in the debate, certainly it is assumed in the careful discussions of the IPCC concerning uncertainties, scenarios and implications. However, this is not always the case. In the literature on climate change mitigation it is not uncommon to find approaches that allegedly need no reflective discussion of the normative grounds of action. Sometimes such approaches are presented as confident dismissals of the epistemic certainty of future climate change, other times they are presented as ethically neutral predictions of the costs of (in)action. The contention here is that the neglect of a genuine philosophical discussion of norms for knowledge and norms for action is a potential danger. Naïve assumptions and stipulations, no matter whether they are presented with the idea of motivating climate change action or contrariwise to undermine it, are damaging and preventive of a successful response to the practical problem of climate change. We should thus begin by isolating some rather traditional philosophical topics from the empirical basis described above that most accounts of climate change will need to address.

These span from abstract theoretical arguments about scientific uncertainty to rather practical arguments about a fair distribution of the burdens of mitigating the problem. One can perhaps divide the questions into those that concern the scientific base of the phenomenon on the one hand, and the social impacts on the other. The philosophical dimension that pertains to the latter category is where the reasoning about sustainable development primarily revolves, and will thus also be the main focus in this thesis. But before that something can be said about some epistemological questions in relation to climate change, such as: 'how much can be known about the climate system?'; and, 'with what degree of certainty can we predict the future climate?'

1.3.1 Epistemic Uncertainties

An infamous debate in relation to climate change is raised by what are sometimes called 'climate sceptics', 'climate deniers', or 'climate contrarians'.

Just to describe this position in opposition to the scientific consensus is problematic: the first term suggests that scientists put a kind of blind faith in their results and that they are opposed by a group that unlike them exhibits the scientific hallmark of skepticism; the second description is problematic in the opposite way as it pejoratively suggests that any dissenting view is comparable to denial; the third description may be preferable, but still not without problems – it suggests a deeply divided picture which importantly turns out to be a misrepresentation. There are climate contrarians of various degrees and focused on various parts of the theoretical-practical nexus that climate change is composed of. The most radically sceptical view is the one in which the basic underlying science, such as the carbon dioxide theory itself, of climate change is doubted. Today such skepticism has little, or no, credibility in the scientific community, where a broad consensus on the reality of anthropogenically induced global warming is affirmed.[11] One has to look to other arenas, outside of academia, to find such criticism, which also casts the relevance of these criticisms for policy recommendations into doubt.[12] It should be noted too that nowadays there are few even among the self-proclaimed climate contrarians that outright deny climate change.[13] The basic observations of the greenhouse warming effect and its root in atmospheric gases are hard to dispute. The target of the critique is more often the pace

[11]Naomi Oreskes (2004) conducted a close survey of the opinions published in peer-reviewed climate science, where 928 abstracts containing the phrase 'climate change' were included. The result turned out that no paper opposed the consensus view expressed in IPCC's reports (that is, that "most of the warming observed is attributable to human activities", which later was modified in the last report to say "most of the observed increase in global average temperatures since the mid-20^{th} century is *very likely* due to the observed increase in anthropogenic GHG concentrations" (Core Writing Team, Pachauri, R.K and Reisinger, A., 2007, p. 39)). See also the study of William Anderegg *et al.* where an extensive dataset of 1372 climate researchers and their publications were analysed to see whether there was any dissent from the consensus view. The result was that 97–98% of the scientists agreed on the tenets of anthropogenic climate change and that the dissenters were generally less scientifically prominent (Anderegg et al., 2010). For a general background to radical climate scepticism see Oreskes and Conway (2010).

[12]Catriona McKinnon (2011, pp. 21ff) convincingly argues that a "permissibility of expertise" and "autonomy of experts"-qualification should be accepted for public reason. That is, when trying to form policies about the problem of climate change, it should be permissible to make references to the scientific consensus of climate science, which in turn should be evaluated by the scientists themselves rather than through a political debate.

[13]The sceptical economist Wilfred Beckerman is representative when he takes only a passively critical perspective: "Although I am aware that the science of climate change is far from fully understood and that several eminent scientists dissent from the so-called consensus view, I will assume that, on the whole, the scientific consensus is broadly correct and that man-made emissions of carbon dioxide will result in some rise in average global temperatures over the course of this century" (Beckerman, 2003, p. 32).

and magnitude of the change as well as the significance of the anthropogenic cause. This development of the disputes of climate change, from challenging the most basic scientific underpinnings (e.g. that GHG have a significant impact on mean global temperature) to the present focus on more fine print details (e.g. the specification of the feedback mechanisms), partially reflects the progress of climate science. Today most contrarians argue that there will be changes in the global climate, only that they will not be catastrophic nor that they are mainly caused by human activities.[14] What appear to be the main target of critique by these contrarians are the interpretations of the (un)certainties expressed in climate models and predictions of future climate change. Since the issue of uncertainty is explicitly discussed, and quite thoroughly so, in the reports of the IPCC, this may seem to be an invited critique. Can we really know what the future climate will look like?

This question may be answered in various ways depending on what kind of knowledge our inquiry concerns. One might understand the debate between the consensus view and contrarians as one about what degree of certainty we should find acceptable in order to assert such knowledge. Since the consensus view expressed by the IPCC is based on a very high degree of certainty (>90%), one is lead to believe that skeptics would demand something even higher than that. But, as Stephen Gardiner contends,

> [i]f it is based on the claims that knowledge requires certainty, and climate science is uncertain, then this may be true in one sense, but nevertheless deeply misleading. To invoke such skepticism selectively against climate science ignores the fact that all science, and almost everything else that we claim to know, is vulnerable to the same charge (Gardiner, 2011a, p. 462).

It is of course still true that one *can* doubt the claims made by the IPCC, just as one can doubt the existence of other human beings as a solipsist, but that should not deter; in fact, an acceptable degree of uncertainty and fallibility are characteristic of science. The radical Cartesian doubt, as the solipsist exposes, puts epistemic demands on science that cannot be met, and should not be required.

There is, however, another matter with predictions of future climate change. Here we cannot, of course, rely on observational knowledge. We are left with estimates and predictions, based on empirical data, statistical tools and different scenarios for the world development, perhaps even without assigned probabilities. The resulting models for future climate will naturally

[14]Such views can be exemplified with Patrick Michaels (2005), Fred Singer (2001), and Bjørn Lomborg (2001).

be open to dispute. This calls for a discussion about risk in relation to climate change.

1.3.2 Climate Risks

Even though no one knows the exact dangers of future climate change, there are more or less adequate predictions. As hinted in the previous section, this need not be problematic; most often decision making takes place under conditions of uncertainty (cf., Hansson, 2012). In fact, we should be frank about any uncertainties, both for strictly epistemic reasons, *i.e.* they reflect the present limits of our knowledge about the climate system, and for strategic reasons, *i.e.* downplaying uncertainties may reduce the credibility of climate science and undermine the case for action in the long-run (cf., Malnes, 2008). If the recognition of the uncertainties of climate modelling is relatively unproblematic, it is nonetheless much harder to come up with acceptable policy recommendations on the basis of them. We should reasonably agree that something less than full certainty is needed to motivate action to prevent a danger, but the exact specification of a sound ground for decision making under uncertain conditions is much more complicated. The following two queries highlight this.

First, take the possibility of the runaway climate change of a plus-6°C world. Think about a scenario were all the so-called slow feedback mechanisms kick in, dangerous tipping points of the climate system are passed and the temperature rise become unmanageable. It is not unimaginable that such a development would present a serious threat against the existence of humanity in itself (cf., Broome, 2010, pp. 106ff). How should such a possibility be related to in climate policy making? The economist Martin Weitzman have, based on traditional, though advanced, risk analysis, argued that we have reasons to put this possibility high on, or perhaps even at the top of, the climate change priority list (2009). Even if the probability of this event occurring is very small, it should be considered to be a high risk since the outcome is so adverse. In the terminology of probability theory, climate change gives rise to a "fat-tailed" distribution on a probability density function, such that peripheral outliers may dominate over more probable events (Weitzman, 2011). Is Weitzman's conjecture correct; should the main focus of climate change action be avoiding catastrophic events?

Think now instead about a seemingly less abstract problem, that of defining a goal for climate change policy. The international work on climate change abatement is premised on the so-called framework convention on climate change (UNFCCC), adopted by the UN at the meeting in Rio 1992. A famous sentence reads:

> The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would *prevent dangerous anthropogenic interference with the climate system* (The United Nations Conference on Environment and Development, 1992, article 2).

The main aim thus is to avoid "dangerous" climate change. But 'dangerous' is not a description of the climate system and is not something which can be observed: it is a normative concept. Even though there are some attempts to provide a scientific substructure to this concept (e.g, Rockström et al., 2009), it is in the end a trans-scientific question about value. In other words, "even though it can be usefully informed by science, it cannot be determined by science" (Hultman et al., 2010, p. 287). How should we thus define "dangerous climate change"?

A natural starting point for such specifications is in the so-called "cost-benefit analysis" (CBA), which can be thought of as an application of "expected utility theory", and loosely related to general risk-analysis. The motivation for a CBA of the problem of climate change and its mitigation strategies is simple enough. We are accustomed to neatly divide complex problems into a pro-et-con schema; benefits of action on one side and costs of action on the other, or correspondingly, costs of inaction on one side and benefits of inaction on the other. Intuitively climate change action (i.e. mitigation) is both a cost and a benefit: compared to doing nothing at all it is an expenditure, but the avoidance of the negative effects of unmitigated climate change is a benefit. Passivity similarly is costless in comparison to the resources needed to act, but costly with regards to allowing the negative consequences of unmitigated climate change to occur. Climate change mitigation may either strain or benefit the economy depending on context and time frame. Generally, climate change action amounts to short-term costs and long-term benefits to the economy. A risk assessment accompanied with a cost-benefit analysis attempts to find an optimal solution to this weighing problem (cf., Broome, 1992; Nordhaus, 1994).

An exemplary clear example of an expected utility theory applied to the problem of catastrophic climate change is presented by John Broome. His method is simplified, but still highlights the main ambition, procedure and obstacles encountered.[15] The basic idea is to come up with a value

[15]It should be noted that Broome's ambition is not to argue for the usefulness of CBA to the question of climate change in itself, rather it is framed as a critique of Weitzman's neglect of ethical reasoning in his use of CBA. In fact, Broome have previously expressed

on the harm done by catastrophic climate change respective to moderate climate change and then to compare these two. In order to produce such a comparison some input is needed, specifically estimates of the probability of occurrence and of severity. In most cases, and certainly in the case of climate change, there are no objective probabilities available of either the likelihood or magnitude. That is, we do not know how likely catastrophic climate change is, nor how bad it would be. If such information were available, then the following formula would hold: risk = probability × consequence. Now, in the absence of this information it is instead: risk = E(probability × consequence), where E stands for 'expected value' or 'expected utility'. Roughly, the difference between the two is captured with the distinction between "objective risk" and "subjective risk" (cf., Hultman et al., 2010).[16]

How then should the input for this expected utility theory be provided? There are different possibilities. The orthodox economist's answer is that we should use existing markets, studying "revealed preferences", to come up with expectations on future costs and benefits (cf., Weitzman, 2007), which then must be weighted against probability estimates. Broome's critique (2010) of Weitzman, as well as a more general disagreement between Stern (2006) and Weitzman (2007), concerns the provision of a severity measure. The answer from orthodox economics is that future costs and benefits must be discounted in relation to long-term market rates of return, whereas Broome and Stern argue that this is an essentially ethical question that must be answered by ethical arguments. I believe that Broome and Stern are correct in their approach to providing a severity measure, for reasons that will become obvious as this thesis develops. The main point to focus on now, however, concerns the probability estimation.

When it comes to these probability measurements both Broome and Stern follow orthodox economics by trying to turn uncertainties into subjective probabilities. This is a way of maintaining the possibility of applying a CBA to the problem of climate change. Even though we do not know the objective probabilities of the various outcomes, consistent (subjective) probability estimates can be provided to make the problem manageable. This approach undoubtedly has been useful, but is still highly problematic in the

serious doubts about the applicability of CBA to problems raised by climate change due to the major uncertainties that pertain (1992, p. 19). Still it is hard not to interpret the following discussion as at least moderately sympathetic to the main ideas of CBA.

[16]It should be noted that there are few people in the risk-community today that make claims about "objective risks". In the early days of risk research this was more common though: risk was thought of as identical to objective probability and estimates as tracking these. Nowadays it can fairly be said that mainstream risk-analysis generally works with different conceptions/perceptions of subjective risks.

present context. The main problem with the application of a CBA with subjective probability estimates is that it is a questionable way of reliably specifying relevant costs and benefits. Just as estimations of severity are not innocent, but depend on a whole set of (ethical) assumptions, so do estimates of probability.

One way to visualise this is through a distinction, provided by Clive Spash (2002), between "weak" and "strong" uncertainty respectively. Weak uncertainty is merely a result of epistemic constraints whereas strong uncertainty additionally involves "unknown unknowns" and unpredictable outcomes. Weak uncertainty can be more or less damaging depending on whether the probabilities of the outcomes are known (as in a case of throwing a dice) or unknown (as in a case of betting on the result of a football match), but commonly the set of outcomes are at least known beforehand. In strong uncertainty this is not the case; strong uncertainty additionally concerns unknown possible outcomes that could be realised. Spash argues that there are two phenomena that are particularly relevant to strong uncertainty: partial ignorance and indeterminacy (2002, p. 122). The first of these refers to the possibility of surprise events and the second to the relevance of genuinely open-ended choice situations (i.e. even if all possible outcomes where available it is impossible to predict how the future will develop because of freedom of will[17]). The presumption made by Stern and Broome is that the relevant uncertainties in the case of climate change are merely weak, which makes it possible to reduce them and, in extension, to come up with risk analyses.

Let us return to Broome's simplified model to see how this could take form. Broome refers to studies cited in the last report from IPCC (2007, section 9.6) of probabilities for extreme climate change: a "5 per cent probability of warming greater than about 8°C, and perhaps a 1–2 per cent probability of warming greater than 10°C" (Broome, 2010). If we accept these probabilities as input, we only need to supplement an estimate of the severity of such outcomes. This is what Broome goes on to specify next. Extreme climate change would in all likelihood destroy most of nature and destroy millions of species and ecosystems. It would also reduce much of cultural life and civilisation to ruins, but to make the case simple and calculable Broome focuses instead only on the direct effect on actual and potential human lives. The severity of extreme climate change is thus represented by the number of people that would be killed as a result of it. Assume then that the catastrophe strikes when the global population has peaked at 9 billion people in 2050

[17]It should be noted that this is not to take a stance in the debate about determinism. Determinism may be true, and thus render the possibility of fully explaining a particular choice without presupposing any indeterminate freedom of the will *ex post*. The claim here is made *ex ante*.

and wipes out everyone and that the probability that this occurs is 1/1000, then the expected number of lives lost is 9 billion divided by 1000, that is 9 million people. Broome's point then is that if we compare this expected loss against the expected loss that results from the more probable but less severe moderate climate change, it is not obvious that the focus should be on the former rather than the latter. The exact figures are, of course, not the point here; the argument, based on expected utility theory, is that we cannot assume that extreme climate change must outweigh any other concern by its severity alone – instead this must be specified and argued for.

Now, it is doubtful whether it is meaningful to state a probability on a temperature increase of, say, 8°C in the first place. Such a prediction depends on, first, how emission trends will develop, which in turn depend on economic activity, technological advancements and climate mitigation strategies among other things; second, even if emission predictions could be made, further information would be needed about climate sensitivity to assess the climatic response to these emission levels. As a further complication, the causal links are crossed: it is not only the case that, for instance, technological development has an impact on emission levels, but also that climate change will be a driver of technology. Much indicates that the uncertainty that pertains to the problem of climate change is different from that of other cases; it is an inherent – so-called "ontic" – uncertainty resulting from a chaotic system rather than epistemic constraints.

Does this mean that a subjective probability ascription cannot meaningfully be assigned? Not necessarily. It should be noted that the possibility of surprise events is not unique to the problem of climate change (a dice may land between the boards in the floor; a football game can suddenly be interrupted by a dog on the pitch), but there is still something different with this case. Normally such outlier events can be ruled out as irrelevant based on prior experience – or, to put it in probability theoretical terms, the tail can be thinned – but as the possibilities we query about here are unprecedented events (e.g. a temperature rise of plus-10°C) we are stuck with the fat tail (Weitzman, 2011, p. 287). This is reflected in the methodological choices made in the scenarios used for the last IPCC report, the problems of measuring relevant uncertainties were taken as a reason to opt for an explorative scenario analysis with storylines rather than predictions based on extrapolated emission trends and "best guesses" (IPCC (Intergovernmental Panel on Climate Change) (2000, p. 24); cf., Rounsevell and Metzger, 2010).

The uncertainties posed by future climate change are thus extremely problematic. Without even entering into the problem of defining the severity of possible outcomes, we have seen how strong uncertainties may preclude any meaningful application of a traditional CBA. This may be taken as a reminder

of a generally recognised restriction of the CBA method, namely that it says nothing about the ends or goals that we should accept (cf., Hansson, 2010). A reasonable interpretation of CBA is that it is confined to specifying the "best" means towards an independently defined end. If we assume that the global temperature increase should not exceed 2°C, then we may use CBA to help determine the most cost efficient way of reaching this target, but it cannot be used to come up with the goal itself. The problem is that CBA is often presented with grander ambitions that cannot be realised. It should furthermore be noted that even on the restricted interpretations there are remaining problems with CBA: it is blind – at least in its standard applications, though it is perhaps not principally so – to both issues of fairness/justice and to differences in risk perception (i.e. whether people are risk aversive or not). In summary, CBA and traditional risk analysis cannot deliver much by way of specifying goals for climate policy, at most it can be a useful tool for implementing such goals once they are already there.

What alternative ways are there to handle the uncertainties of future climate change? I believe that we can we discern at least three different approaches. The first alternative would be to adopt a "wait-and-see strategy" on a general level, complemented with selective "no-regret" actions, i.e. implementing policies that are beneficial irrespective of their effect on climate change. Although no-regret, or win-win, policies are commendable, it is not promising as a general strategy to the problems of climate change. Delayed climate change action is most likely a hazardous way of gambling with the future – during the time in which we try to reduce uncertainties we may pass critical thresholds with no reasonable way back – and, as the previous discussion has showed, it is not even clear that all uncertainties are surmountable through more research in the first place.

The second and third response commonly share the idea of giving ethics or values a more prominent position here. The idea naturally builds on the limitation of CBA argued for above, namely its inability to set out ends for climate policy. To quote Jamieson again: "Economics may be able to tell us how to reach our goals efficiently, but it cannot tell us what our goals should be or even whether we should be concerned to reach them efficiently" (Jamieson, 2010 [1992], p. 82). On basis of this negative conclusion one could attempt an approach that is more directly concerned with ends. The second alternative is to frame questions of uncertainty and risks as "post-scientific" questions, to be answered democratically with participation of non-scientific stakeholders in an "extended peer community" (Funtowicz and Ravetz, 1993; cf., Hultman et al., 2010, p. 295). The idea here is to take the strong uncertainties and high stakes as mandating the development of new problem-solving strategies to facilitate a well-functioning science-society interface. I will not dig deeper into

this field of "post-normal" science, but merely note its existence and choose another approach. The alternative which will be preferred in this thesis can be called "justice-based". It is an explicitly ethical approach to questions of uncertainty and risk. The general question is: how can reasonable and unreasonable risk imposition be distinguished; or, in the words of Robert Nozick: "Imposing how slight a probability of a harm that violates someone's rights also violates his rights?" (1974, p. 74).

In this thesis I will develop such a justice-based approach to climate risks, with the basic idea being to specify a level of (un)reasonable risk-imposition as an inherent constraint in national development policies. A point of clarification after this initial discussion of the uncertainties in relation to future climate change: the uncertainties discussed now concern the boundaries of the concept of (climate) risk – i.e. when does an atmospheric concentration of greenhouse gases become "dangerous", or when are we contributing to a catastrophic climate change? – whereas the situation within these uncertain limits still can be clear. It is not generally uncertain that continued burning of fossil fuel and deforestation will contribute to a temperature change that will harm people within our life time; the uncertainties concern the full specification of these harms over long time horizons in exact numbers. My contention, which will be argued for as the thesis progresses, is that we do not need such exact specifications in order to reorient some of our present day activities in accordance with the dangers of climate change. We do not need necessary and sufficient conditions to distinguish dangerous from harmless climate change, nor a detailed account of how catastrophic and moderate climate change are related. What we do need, however, are principled arguments as to why present day activities are defective or faulty in virtue of their contribution to climate change.

1.4 Climate Change and Sustainable Development

Chapter 2 of this thesis is dedicated to the concept of sustainable development, where my approach to political theory and normativity in general will also be stated. Without the need to pre-empt that discussion, something can be said in general about the relation between normative theorising about climate change (i.e. what ought we do in relation to climate change?) and the concept of sustainable development. This is important since these two conceptual fields are separate, though often discussed in tandem. First of all, the political concept of a sustainable development was not presented as a response (merely) to problems of climate change. In the Brundtland Report from 1987 climate change was mentioned, but not given a prominent place among the global

environmental and developmental problems discussed as probably would have been the case if the report came today.[18] Secondly, when political action in relation to climate change is discussed it is not always presented under the umbrella of sustainability or as a means to create a sustainable development. Likewise, in the early reports by the IPCC – that is, FAR (1990) and SAR (1995) – sustainable development was given scanty attention.

This may not be surprising since the two ideas came from the opposite sides of the scientific divide between natural and social sciences. Climate change emerged as a topic of discussion from the work of natural scientists (see, Agrawala, 1998)[19], while sustainable development was introduced as a move towards primarily social improvements – epitomised in the Brundtland report by the call for "a future that is more prosperous, more just, and more secure" (1987, p. 1). However, lately the isolation, or "towering" to use an expressive metaphor used (see, Norton, 2005), of natural and social sciences – as well as the composite disciplines – has been challenged broadly.[20] A weariness of the present structure of science has been expressed by numerous scholars addressing the climate change complex, and even resulted in the formation of a new research field in 'sustainability science' (see, Clark and Dickson, 2003). Even if the discussion of climate change is still encompassing enough to accommodate much traditional disciplinary work, one can describe this as part of a general tendency to take the integration of natural and social science as essential in properly addressing the problem. Also the later work of the IPCC could be mentioned as an attempt to bridge the gap between the natural facts of climate change and the political reality. The target audience of the work of the IPCC, although rather vaguely expressed, is captured in its self-image here: to "provide the world with a clear scientific view [− − −] [and] the work of the organization is [...] policy-relevant and yet policy-neutral,

[18]When the environmental problems were first introduced, climate change (or 'global warming' in terminology then) was mentioned first after the issues of desertification, deforestation, and acidification. And when, in the most substantial part of the book, the "common challenges" are discussed, climate change ('global warming'), unlike say 'the urban challenge', is not made into a specific theme at all, but only addressed as a possible aggravator of other challenges.

[19]Agrawala describes the beginning of the entry of climate change into politics as follows: "It was at Villach 1985 that a consensus was reached by an international group of scientists (participating in their *personal* capacities) that 'in the first half of the next century a rise of global mean temperature would occur which is greater than any in man's history'. These experts also recommended that 'scientists and policymakers should begin active collaboration to explore the effectiveness of alternative policies and adjustments' [quotes from WMO, 1985. *International Assessment of the Role of Carbon Dioxide and of Other Greenhouse Gases in Climate Variations and Associated Impacts*, Villach, Austria.](Agrawala, 1998, pp. 607f)

[20]See, for instance, Jerneck et al. (2011) and Biermann et al. (2009).

never policy-prescriptive" (Keller, 2010).[21]

There no doubt exist conflicts and incommensurabilities in the interface between natural and social dimensions of large scale global problems. Perhaps the early work by the IPCC could be accused of dealing "with the human or social dimensions of global change by attaching some social science analysis, virtually as an appendage, to a body of work that defines the problem in terms of natural science approaches" (Cohen et al., 1998, p. 341). If there is any truth to this it is truly a failure of working group III of the IPCC, as it was initially given the objective: to "place the socio-economic perspectives of climate change, in the context of sustainable development" (IPCC (Intergovernmental Panel on Climate Change), 1995, p. ix). However, since then the IPCC has released two new reports, the Third (TAR) and Fourth (AR4) assessment report (published 2001 and 2007 respectively), which more or less completely change this picture. In the latest report it is asserted, in the full chapter devoted to the subject entitled "Sustainable development and mitigation", that "[t]here is a growing emphasis in the literature on the two-way relationship between climate change mitigation and sustainable development"(2007, p. 693).[22] Similarly, the following expression suggests an improved ambition:

> Natural, technical, and social sciences can provide essential information and evidence needed for decisions on what constitutes 'dangerous anthropogenic interference with the climate system.' At the same time *such decisions are value judgements* determined through socio-political processes, taking into account considerations such as development, equity, and sustainability, as well as uncertainties and risk (IPCC (Intergovernmental Panel on Climate Change), 2001, p. 2).[23]

In the wide field of climate change a broad consensus has been built, primarily as a result of the rigorous work of the IPCC, around the thought that the political ideals are primarily understood as emission targets. Even if

[21]From the webpage of IPCC, with the URL: http://ipcc.ch/organization/organization.shtml.

[22]In the (2007) IPCC report, a useful distinction between "climate first" and "development first" is drawn though. It concerns the possibly synergetic relations between climate change mitigation and sustainable development, and represents two different emphasis: Either focusing on mitigation may contribute to "other sustainable development goals", or "climate change mitigation [can be] treated as an integral element of sustainable development policies"(2007, p. 695). But even this potential door to a socially more well-informed approach is only slightly opened: the examination of the interconnections here are done "through a climate change lens", as John Robinson et. al describes it. (Robinson et al., 2006, p. 3).

[23]Quoted in (Gardiner, 2010 [2004], fn. 3).

these certainly comprise a crucial part of the answer to climate change and deserve a salient position in the debate, they need to be complemented by ethical arguments. There is no way round a process of normative reasoning when it comes to deciding on and motivating a specific political target for climate change mitigation. One of the contentions of this thesis is that the ethical discussion of sustainable development can fill a void, and present an alternative, more unified, picture of the normative side of climate change. In the final chapter, I will argue that the relevant sense of limits to development, or climate change thresholds, is as a social construction forced upon us by our deliberate engagement in development (rather than something to be discovered by scientific methods). That is not to say that the ethical reasoning behind such a social construction is disengaged from an empirical reality; on the contrary, it is only on basis of the relevant information from the IPCC, and others, that the problem we set out to solve takes form, and this foundation subsequently plays a role of informing the reasoning.

1.5 Climate Justice

The idea for the coming chapters is to approach climate change as a question of justice, formulated on basis of the concept of a sustainable development. This approach necessitates an additional primer, namely a rough idea about what a theory of justice is and how it functions. There are some distinctions that can be made, which allow us to have a clearer view of what is meant by a criticism of current development practices as unjust in virtue of their contribution to climate change.

A first distinction is the contrast between a wide and narrow sense of justice. John Rawls famously begins his *A Theory of Justice* by saying that "justice is the first virtue of social institutions" (1971, p. 3) and goes on to defend a position where justice only applies against an institutional background in a wide sense. A similar view emanates from the Hobbesian tradition, where justice needs a sovereign as a precondition for its application. In the "state of nature" prior to any social institutions, Hobbes argued that "nothing can be unjust" since "[t]he notions of right and wrong, justice and injustice have no place there. Where there is no common power, there is no law; and where there is no law, there is no injustice" (Hobbes, 2006 [1651], Pt. 1, Ch. 13, § 13). Similarly David Hume seems to have assumed such an institutional view of justice, exemplified by his discussion of justice as an "artificial virtue" (Hume, 1978 [1739], pp. 477ff). This concept/ion of justice, shared by Rawls, Hobbes and Hume among others, can be distinguished from a concept/ion of justice as a natural and personal disposition of men. The

latter idea can be attributed to Plato's discussion of justice (dikaiosyne) in the *Republic* and is a much wider notion, *viz.* a harmony in the soul of the virtuous agent (Slote, 2010; cf., Vlastos, 1969). Christine Korsgaard's recent work (2009) is a contemporary example of someone espousing this idea of justice. The concept of justice from which our theory of climate justice will be developed is of the institutional or narrow kind, although it will be clear in the next chapter that 'institutional' is understood in its widest sense as something like a joint venture or common enterprise. The assumption here is that claims of climate justice only make sense against an institutional background; innate feelings of injustice or appeals to a divine order are unsuitable bases for our theory. The basic reason for this has to do with practicality; that justice should play a practical role as an arbiter of these competing claims.

This approach, and its assumptions, may seem highly problematic when faced with climate change that is transboundary in many ways. As climate change is a global and intergenerational concern, and we lack satisfactory institutions in these contexts (cf., Nagel, 2005), it may seem as if this makes climate justice a non-starter. My contention, however, is that *it is* possible to construct a theory of climate justice in the absence of a fully developed global and intergenerational institutional order, and will argue for this possibility in later chapters. If this seems contradictory, it is because 'institution' and 'institutional order' are ambiguous terms: the institutional approach to climate justice vindicated here does not rest on the existence of a global sovereign (such as a world government), but on particular kinds of cooperation over time and space.

A second distinction which is of relevance for what follows concerns the function of a theory of justice. Roughly it gives two different answers to the question 'should a theory of justice model an ideal world for us to strive towards, but perhaps never reach, or should it rather give concrete guidance on how to deal with specific and experienced instances of injustice?'. The difference is captured in a distinction of Rawls's between "ideal" and "non-ideal" theorising (Rawls, 1971, pp. 7-8 and 212). Rawls asserted that his theory of justice applies only to a "well-ordered society", that is a one where (general) compliance with the principles of justice can be assumed. The assumption of general or full compliance is also what is usually meant by ideal theory. Non-ideal theory comes from the fact that in all likelihood such a "perfectly just society" never will materialise, and the consequent need for principles that govern less-than perfect societies (1971, p. 8). This kind of theory was defined as the study of "the principles that govern how we are to deal with injustice" (1971, p. 8).

Let me begin by stating why I think that this distinction is important for the question of dealing with climate change. The most obvious way

of doing this is to point to the fact, as was done above, that the political and institutional order in which the problem of climate change is addressed is far from being "well-ordered". There is no global and intergenerational society in which principles of justice can be expected to be complied with. It may even be doubted whether we could ever assume that future people must generally comply with principles agreed upon today. A worry thus is that ideal theorising risks being empty gesturing or wishful thinking at best. Maybe we do not even need to extend the scope of application to global and intergenerational justice to stumble into this unfortunate conclusion; we need only to think of how climate change is actually addressed as a political problem (of international justice) under the auspices of UNFCCC. The international climate negotiations, the so-called "Conferences of the Parties" (COP), which have been running since 1995 have so far produced few concrete results. Is it perhaps vain to present an ideal theory of the distribution of responsibility for climate change abatement when we cannot even agree on a problem formulation in the first place? One may at least worry about the demands of justice being hard to enforce. In the context, a justice-based approach may be thought of as naïve in light of the fact that some of the biggest emitters of greenhouse gases could not be persuaded to sign the Kyoto protocol. A feeling of dejection, as expressed by Brian Barry in the quote above, may deluge us: "whether we make the demands of justice more or less stringent, it is going to demand more than is likely to get done in the foreseeable future". The basis of such expressions is the thought that ideals of justice need to be enforceable, or at least, practically feasible. Let us address this as a final uncertainty of relevance to climate justice. The question is whether we could construct a theory which would lead to a distribution of responsibility for addressing climate change (however that is defined) which all relevant agents could reasonably comply with?

Naturally this depends on how we understand 'can comply'. The most restrictive interpretation would be something like 'what is actually agreed on here and now'. On this basis, a position or principle would be considered infeasible if anyone objected to it, whether the opposition was reasoned or not; a simple refusal would be enough.[24] Obviously this would not take us very far. Still this 'actualist' sense of feasibility (or as it is sometimes – but somewhat misleadingly in the context – called "political feasibility") is important to note since it is appealed to relatively frequently in the climate change debate.

[24]Compared to the other kinds of feasibilities, this actual or political one is especially hard to come to grips with, as it constantly changes over time. Political opinions that may have been impossible to democratically anchor in historical times can have widespread support today (e.g., green taxes would probably not have been passed in the 60's, while they are commonplace today).

Just to mentioned one example: it is not uncommon to hear that climate justice is impossible because of the lack of political willingness shown in the international climate change negotiations. But, this is not the most relevant sense in theorising about climate justice: whether a principle can be complied with should not be determined by the actual situation on a surface level, some abstractions are needed.[25] That a normative theory needs some kinds of abstractions or idealisations can be said with relative ease, but exactly how many and how far-reaching they should be is much trickier.

The alternative, normative, sense of feasibility can be understood in various ways. Based on the widely accepted dictum 'ought implies can' some alternatives take form. A strong emphasis on practical circumstances may lead to the interpretation that a normative theory issuing 'oughts' needs guarantees that they are 'reasonably likely' (Estlund, 2007, p. 265)[26] to act upon. In the other direction, one could argue that one should interpret the 'can' very generously to mean something like 'conceivable', which would allow us to make more idealistic normative claims. Even further still, one could argue against the distinction altogether, as G. A. Cohen does when he argues that normative principles are fact insensitive (Cohen, 2003). In relation to this last, and most generous, interpretation of 'can', it can be noted that even this would exclude some proposals as being infeasible, namely those that are logically or metaphysically inconsistent. However, this still leaves quite a lot of wiggle room for a theory of justice.[27]

The only other restriction I think we should assume comes from the practical approach we adopt. It can be presented through Rawls's idea of a "realistic utopia" (1999, pp. 11-13), which he defined, with the use of Rousseau's words, as the best we can reasonably hope for "taking men as they

[25]That said, we should not conclude that this sense of feasible is without importance for normative theorising all in all. Some kind of political feasibility may need to be included in ideal and, even more so in non-ideal theory. A theory of justice that meets a deep-rooted and persistent resistance would be neither feasible as a goal or a means to one. In fact, it is questionable in what sense such a theory would be normative whatsoever if it was not in any way indicative of action.

[26]Quoted from Stemplowska (2008).

[27]It can be noted that in the tradition of moral and political philosophy these issues have been given only a facile treatment. Immanuel Kant, for instance, said of moral aims that "so long as it is not demonstrably impossible to fulfil them [they] amount to duties" (Kant, 1977 [1793]) (Quoted from Räikkä (1998)), ignoring the fact that few act as good Kantians, with the result of a much idealised theory. Contrariwise, the traditional utilitarian doctrine could be accused of not having/respecting any ideals whatsoever; what matters is that utility is maximised from where we evaluate. Such theories could be thought of as "moral purists" (Philips, 1985) or as "single-level theories" (Korsgaard, 1986). To use Korsgaard's vocabulary, a double-level theory includes both a moral ideal and an account of what constitutes "very bad" circumstances such that we must depart from that ideal.

are and laws as they might be" (1999, p. 7). The 'can' must be anchored in theories of human nature, in particular our moral and psychological natures. A theory of justice as a realistic utopia "probes the limits of practicable political possibility" (Rawls, 2001, p. 4; cf., Simmons, 2010). In order to make this more specific we accordingly need conceptions of persons and their interrelations with one another, as will also be presented in the following chapters. In general this thesis can thus be understood as arguing for an empirically informed normative theory. Sustainable development will be explicated as being normatively desirable *in light of* empirical realities. Such a project does, of course, risk certain pitfalls, especially since both normative and empirical criteria are relevant points of assessment. Some of the questions hinted at in this section will be returned to as the thesis progresses. But it also has a distinguishing advantage: it proceeds on basis of actually existing disagreement found in modern day societies and presents a justified and feasible proposal for addressing a common concern that is reasonable in light of each and everyone's own point of view. The idea is structurally similar to what Rawls talked about as an "overlapping consensus": the goal is to argue for a principled way of addressing climate change that people with very different set of values and commitments can all reasonably accept (although they do so for different reasons).

It should be emphasised, though, that even if we have this practical outlook this does not mean that the output will take the form of concrete action-guidance, even less a blue-print for solving climate change. What is presented is instead the contours of the reasonable in the climate change discussion. If the arguments of the following chapters are successfully made, we should have some rather clear ideas about what should not be done, which arguments should not be appealed to, and which considerations can be excluded in trying to motivate climate change action. Any more concrete policy-recommendation will in the end always depend on political negotiations.

One last resource for narrowing down the moral and political possibilities can be presented in its outline though, namely the feasibility constraints of non-ideal theory. For various reasons non-ideal theory is particularly relevant in the climate context. Greenhouse gas emissions have been emitted historically in still continuing and accelerating trends; issues in relation to noncompliance thus seem salient. Neither is it far-fetched to hypothesise that even if a realistic climate utopia were presented, we should still expect many cases of defiance and noncompliance. Chapter six is therefore devoted to the question of non-ideal theory. Already now, on a general level, we could state that the feasibility constraints of non-ideal theory should likely be somewhat more discriminatory for it to function well. Its directions must be sufficiently practical to resolve actual disputes to make it probable that we move in the direction of our ideal

theory. Considered only in abstraction, it is hard to precisely specify what kind of feasibility this amounts to. Maybe we should search for an answer in what is technically, socially, institutionally, and psychologically feasible. Neither of these feasibilities should be understood as evaluating only from the present state of the world, but rather as extrapolating from it. For instance, it may be technically feasible to argue that we ought to engage in geoengineering – such as, carbon capture and storage – even if it is not possible at large scales today. As for the institutional feasibility, which is considered by many to be a weak point in arguments about international and intergenerational justice (Gilabert, 2008; Gardiner, 2011a), it should again be emphasised that it is not a requirement that international democratic institutions need to be in place, only that there is a possibly existing institutional framework under which these principles could be adopted.

Finally, it should be mentioned that even if sustainable development can be understood as an ideal climate justice, it is partial rather than comprehensive, following a distinction provided by Ingrid Robeyns. She writes of a partial theory that "it specifies the minimal principles of justice, while leaving open the possibility that if these principles are met, further principles of justice would need to be achieved" (Robeyns, 2008, p. 344). In the interpretation of sustainable development argued for in this thesis, there will be no claim of completion. There are, however, critics who would argue that anything but a complete theory of (climate) justice is without value. Others have argued that sustainable development is not only incomplete, but wholly empty or nonsensical. These concerns should be answered in the following chapter.

Chapter 2

Sustainable Development. A Constructivist Approach

> *Our Common Future is more coherent and potentially more radical than either adherents or critics seem to be aware of.*
>
> — Langhelle 1999, p. 130

Sustainable development may be described as an "essentially contested concept" (Gallie, 1956). Since the introduction in the late 1980's, its meaning has been discussed and challenged widely. The different interpretations have been radically divergent, calling into question whether it is one and the same concept that has been discussed. We find understandings of sustainable development as 'continued economic growth' (Beckerman, 2003). However, such interpretations have been the target of much criticism – for instance, it has been argued that 'sustainable development' is an oxymoron (Daly, 1993) – which has lead towards a radically different interpretations of sustainable development as 'preserving the world as it is'. In such interpretations, many environmentalists have dismissed the anthropocentrism of sustainable development and opted for a shift of emphasis, from a focus on the "development-part" to a focus on (ecological) sustainability, or 'strong sustainability' (Rolston III, 2002). In addition to these, there are hundreds, if not thousands, of different analyses and attempts to define, or at least operationalise sustainable development out there.[1]

What should one make of this long-standing debate about the proper meaning of sustainable development? Some have warned against the future use of the concept, since its ambiguity and vagueness may lead to ideological discussions or rhetorical lapses; a common worry is that it may be used for

[1] For overviews of the concept see the following *inter alia*: Hopwood et al. (2005); Kates et al. (2005); Mebratu (1998); Pezzoli (1997).

"cosmetic environmentalism", or "greenwashing" (see, Athanasiou, 1996, ch. 5). In a similar way, albeit from quite another direction, economists have argued that sustainable development is used as a 'political slogan' (Beckerman, 1994), or a 'vague emotional commitment' (Solow, 1993). Whether they are right or wrong about this, a clear implication of the disputed nature of sustainable development can be inferred: as long as this conceptual unclarity pertains, it is unlikely that substantial policies will be generated (Connelly, 2007, p. 260; cf., Hulme, 2009, ch. 8). In the words of Mike Hulme (2009, p. 251): "One of the reasons we disagree about climate change is because we understand development differently". We need to know what we are talking about when we talk about sustainable development. The aim of this chapter is to provide a rational ground for such discussions.

The argument will be that the concept 'sustainable development' should be understood as a normative concept in the sense of being a solution to a practical problem. It should not be studied through the traditional conceptual analysis; there is no point trying to find things in the world which the concept picks out. Neither can we find a univocal meaning. Sustainable development as a normative concept does not correlate to an external normative reality, independent from us. We need to think of this exercise as practical *all the way*: we (or: the relevant agents) need a solution to a problem encountered. Such a solution, it will be argued, must be constructed from features of the problem itself; it answers the question 'what is it about the situation that needs to be dealt with?'. The answer – that is, the concept of sustainable development – is, however, only the rough outline of a solution. It comes in the form of an abstract idea, from which no clear action directives can yet be deduced. It must first be supplemented with specific conceptions of the agent and her situation, to specifies the values and take us from the abstract to the concrete. This method will be further explained in section 2.3 below.

This chapter will have the following structure. In the next section comes a brief history of the discussions leading up to the construction of sustainable development. The following section moves the discussion to a more philosophical arena; a few more salient analyses of the concept of sustainable development are presented. These will work as a general background to my own analysis in the subsequent section. Departing from what has been mentioned already, the essential contestedness of sustainable development, I will propose a way of preserving a rational meaning while at the same time accounting for the normative disagreement that exists.

2.1 A Brief Conceptual History

Most histories of the concept of sustainable development depart from the United Nations Conference on the Human Environment in Stockholm, 1972.[2] This meeting is said to have been unique in that it was the first high-level meeting to put the problems of environment and development on the same agenda. There are, of course, precursors also to this discussion in economics[3], political philosophy[4], and ecology[5]. Another important addition to this historical picture is the oft-quoted work of, what was called, "the Club of Rome": *Limits to Growth* (Meadows et al., 1972), which initiated a discussion – as the title suggests – about possible natural limits to economic growth. Finally, one should mention that similar problems had been discovered by religious associations.[6]

A common pattern emerged in the run up to what would be called sustainable development: a questioning of unregulated economic growth. It was put most acutely in what has come to be the standard reference for the concept, namely in the UN-initiated report *Our Common Future* (World Commission on Environment and Development (WCED), 1987, p. 49): "The world must quickly design strategies that will allow nations to move from their present, often destructive, processes of growth and development onto sustainable development paths." With the release of this report, most often referred to as the

[2]The outcome of this meeting, summarised in 26 principles, can be found here: http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503.

[3]Thomas Malthus, for instance, is often mentioned. His work on population issues and "environmental limits" in relation to feeding a growing number of people. One must naturally also mention resource economics (economics meaning something like 'management of household') in general too.

[4]Some have argued that structural similarities, such as ideas of small scale politics, could be found both in the anarchist Peter Kropotkin's writings and in the economist Ernest F. Schumacher's ideas (see, Mebratu, 1998).

[5]Many (cf., Hopwood et al., 2005) attribute the first important use of the term 'sustainable development' to the International Union for Conservation of Nature (IUCN) in their report of 1980 (*World Conservation Strategy: Living Resource Conservation for Sustainable Development*).

[6]The World Council of Churches, for instance, wrote in 1976: "The twin issues around which the world's future revolves are justice and ecology. 'Justice' points to the necessity of correcting maldistribution of the products of the Earth and of bridging the gap between rich and poor countries. 'Ecology' points to humanity's dependence upon the Earth. Society must be so organised as to sustain the Earth so that a sufficient quality of material and cultural life for humanity may itself be sustained indefinitely. A sustainable society which is unjust can hardly be worth sustaining. A just society that is unsustainable is self-defeating. Humanity now has the responsibility to make a deliberate transition to a just and sustainable global society." Quoted from Langhelle (2000).

'Brundtland report' after the chairperson Gro Harlem Brundtland, the concept stuck in the debate and rose to the awareness of a general public. While the earlier discussions of 'sustainability' or 'sustainable development' could be considered isolated phenomena, sustainable development now approached the position of a hegemon in international politics and economics. Unlike its precursors, sustainable development was received as a broad, synthesising approach, indispensable to future discussions, almost irrespective of subject. What was it about *Our Common Future* that would have such an immense impact? To understand this we should start with the commencement of the commission. WCED was convened 1983 with the following ambitiously three-folded task:

> 1. to re-examine the critical issues of environment and development and to formulate innovative, concrete and realistic action proposals to deal with them;
> 2. to strengthen international co-operation on environment and development and to assess and propose new forms of co-operation that can break out of existing patterns and influence policies and events in the direction of needed change; and
> 3. to raise the level of understanding and commitment to action on the part of individuals, voluntary organizations, businesses, institutes and governments (1987, pp. 356f).

These three objectives are, of course, primarily centred on what is specified in 1, namely the problems of the conjunction of environment and development. Neither environmental policy, nor developmental politics worked satisfactorily, and the claim here was that the explanation is the single-handed focus on one at the expense of the other.

The report, divided into three parts composed of 12 chapters, was supposed to bring clarity to these issues. Part I, called "common concerns" is perhaps the most philosophically interesting part since we there find most of the theoretical discussion as well as the well-known definition, i.e. *sustainable* development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development (WCED), 1987, p. 43). Part II, named "common challenges", is more practical. There each of the chapters is devoted to one of the "critical issues" mentioned in the objective of the commission; everything from threats to biodiversity to planning of mega-cities are scrutinised. Finally, the third part, called "common endeavours" is geared towards the second and third task of the commission. Here the hope is to find political and legal alternatives that may result in "needed change". Since substantial parts of the report are empirical surveys, much of it has

passed its expiration date. If anything can fully be reclaimed today it is the approach itself: the ambitious attempt to address large-scale problems by means of pragmatism. Presumably this is the main reason for the continued relevance of the Brundtland definition of sustainable development.

Finally, before closing this brief historical exposition, a follow-up meeting to the Brundtland Report should be mentioned. That is the "Earth Summit", or the United Nations Conference on Environment and Development (UNCED), in Rio de Janeiro, Brazil, in 1992, with participation of 172 governments.[7] The outcome of this meeting were some important international documents – such as the Rio declaration, Agenda 21, and the United Nations Framework Convention on Climate Change (UNFCCC) – which contributed to the creation of a political and institutional setting for global concerns round environmental and developmental issues. The subsidiary objective to work out the concrete details of the theoretical construct of sustainable development should also be mentioned, even though it can scarcely be considered successful in retrospect. The greatest consequence, and possibly success, of the Rio conference instead came before the actual meeting, as Desta Mebratu notes: "the most important legacy of UNCED was the very nature of the preparatory process, which, in most countries, involved participation of major stakeholders down to grassroots level [...] [,it] took the concept of sustainable development to every corner of the world" (1998, p. 502)[8]. One could perhaps say that a general consensus had now been formed around the desirability of sustainable development, even though there was a great confusion about what was actually desired.

2.2 Different interpretations of a Contested Concept

2.2.1 As Durable Economic Growth

Having briefly examined the historical origins of the concept we can now place it within its context of discussion. The concept of sustainable development is ambiguous; the history tells us that the concept has been open to different and

[7]Perhaps another such meeting should also mentioned, namely the World Summit on Sustainable Development (WSSD), which was held in Johannesburg, South Africa in 2002. It is commonly asserted that no decisive shifts resulted from this meeting though.

[8]Actually the same could have been said about the work with *Our Common Future*, which also helped raise the public awareness of the concept. The commission, WCED, organised public hearings all over the world during the around 4 years it was at work. These, of course, had the effect of spreading the idea worldwide.

sometimes contradictory interpretations. Let us first consider how sustainable development entered into economic debates.

The reception of the concept of sustainable development among economists was dual. It was both cherished as a healthy re-evaluation of defective theorising about development and growth, and at the same time criticised by others for being an empty expression diverting attention from real economic issues. The debate shattered the economists into two – or maybe even three – different camps, depending on different conceptions of the subject matter. On the one hand, there were some economists who saw this as a chance to restructure the main tenets of economic theorising, which lead to formulations of alternative economic positions (most of them under the name 'ecological economics'). On the other hand, orthodox economists kept their basic theory and handled the new demands in one of two ways: either they tried to address environmental issues as a problem of 'externalities' (under the name 'environmental economics'), or they argued that the issues of environmental degradation and corollary societal stress did not pose any novel problems, but could be handled without any changes to mainstream economic theorising whatsoever.

In the orthodox camp, a common approach can be exemplified with the following quote of Robert Solow: "If 'sustainability' is anything more than a slogan or expression of emotion, it must amount to an injunction to preserve productive capacity for the indefinite future" (1993, p. 163). Wilfred Beckerman strengthens this claim in the assertion that "the concept is basically flawed [...] because it mixes up together the technical characteristics of a particular development path with a moral injunction to pursue it" (1994, p. 193). Both Solow and Beckerman took this as a sign to radically reformulate the discussion of sustainable development, and were quite successful in the sense of influencing much of the coming debate. Unfortunately, important parts of the meaning were lost in these attempts to translate the political concept to economic theory. Even if, as seen above, it was recognised that the concept is not only a technical term, it was still insisted that the definition should be, as it were, an operational definition. It is not a harmful concession to accept that the 'technical characteristics of a particular development path', in itself, does not carry any particular moral imperative. But it misses the point when it is framed as a definition of sustainable development. The discussion is not about the meaning of sustainable development, but rather about the rules of application (cf., Asheim, 1999). For the sake of the argument, let us still parse out these economical analyses.

According to Beckerman the issue is clear: "'sustainable development' has been defined in such a way as to be either morally repugnant or logically redundant" (1994, p. 192). As 'sustainable', according to Beckerman, is a

technical notion, meaning 'could be maintained in the foreseeable future'; the basic question is what should be maintained? Instead of looking at the definition of sustainable development in the Brundtland report – dismissed on account of being a "useless criterion"[9] – he instead picks out some more peripheral passages. There are indications in the Brundtland report of a sense of sustainable development that departs from the actual definition; it seems as if it is not only needs satisfaction that should be maintained over time, but equal opportunities or sets of choices (e.g.,WCED, 1987, p. 46). Still, since it is not part of the definition, it is a somewhat peculiar base for an argument. Even more remarkable is the extrapolation from these passages to the conclusion of a radical politics of preservationism, i.e. sustainable development as 'keeping the world intact over time'. Obviously, in perspective of more acute priorities, such as poverty alleviation, such an understanding would be, as Beckerman asserts, "morally repugnant". It is, however, also explicitly recognised in the Brundtland report.[10] To define sustainable development in the way just mentioned has anyhow been referred to as 'strong sustainability', although it is questionable whether anyone really accepts it (see the next section).

The twist of Beckerman's argument is that there is but one alternative way, he envisions, in which we reasonably could answer the question about what should be sustained, and that understanding makes the concept "logically redundant". The only acceptable position here, according to Beckerman, is what has been called 'weak sustainability'. On this understanding, it is not the case that the natural world should be preserved intact, instead it "allows for some natural resources to be run down as long as adequate compensation is provided by increases in other resources, perhaps even in the form of man-made capital" (Beckerman, 1994, p. 195). Beckerman reasonably argues that "adequate compensation" must be understood in terms of human well-being, but then hastily concludes that this amounts to welfare maximisation over time. According to Beckerman, sustainable development thus is either a theory that implies unreasonably hard requirements, or just a variation of standard growth theories in welfare-economics.

Solow works more carefully towards the same end. His answer to the question about what should be maintained over time is "a generalized capacity to produce economic well-being". To Solow, then, "a sustainable path for the national economy is one that allows every future generation the option of being as well off as its predecessors" (1993, p. 168). As far as policy is concerned

[9]We will get back to this dismissal in the next chapter, and argue that it was too rash.

[10]E.g., "Economic growth and development obviously involve changes in the physical system" (WCED, 1987, p. 45).

this could mean a few different things, which are commonly mentioned in connection with this definition. It could amount to what is usually called 'internalising the externalities', i.e. counting the full – or 'true' – cost of things produced and consumed; it could amount to investment programs to compensate for 'withdrawal from the inherited stock' of capital, etc. Such implications should not be criticised for being too meagre or plain, but are in fact quite far-reaching and to date still controversial in the context. Still they merely concern one of the main tenets of the concept of sustainable development: the physical basis. It is asserted in the Brundtland report that "[a]t a minimum, sustainable development must not endanger the natural systems that support life on Earth: the atmosphere, the waters, the soils, and the living beings" (e.g.,WCED, 1987, pp. 44f). This, of course, is of pivotal importance, but it does not exhaust the meaning of sustainable development; it is rather a necessary condition. The conclusion is that the reception among economists, usually discussed under the heading of 'weak sustainability', misconstrued the meaning of sustainable development as merely 'physical sustainability'. In their eagerness to sort out normative parts of the definition, essential parts of the concept were lost. Let us now briefly consider an alternative economic analysis.

2.2.2 As Strong Conservationism

Quite a few economists who took an interest in sustainable development defended a much more extensive analysis, named 'strong sustainability'. The most well-known proponent is Herman Daly, who explicitly addressed Beckerman's critique, and thus becomes appropriate to briefly mention here. Essentially Daly's defence strategy is to accept the formulation of 'weak sustainability' and attack Beckerman's construal of 'strong sustainability' as a straw man position. He refers to the radical preservationist politics as 'absurdly strong sustainability' (Daly, 1995, p. 49), and accepts its dismissal. The main issue to consider, according to Daly, is whether "manmade and natural capital [are] substitutes or complements" (1995, p. 49). The argument, in essence, is that natural capital is not perfectly substitutable with manmade capital – not a surprising conclusion. Daly gives some reasons for this anyway. First, he argues, if natural and human capital were perfect substitutes, then we would have no reason not to settle for natural capital in the first place, and hence no reason to accumulate human-made capital. His second argument, which he also calls the 'defining condition of complementarity', states that "producing more of the alleged substitute (manmade capital), physically requires more of the very thing being substituted for (natural capital)"(Daly, 1995, p. 51). In the last instance, energy is, of course,

needed as input for any production, and as a natural "resource", it is in a sense nonrenewable. But this conclusion may not be that exciting, as the time perspectives involved naturally are immense. Here the answer is invited from Beckerman: "'natural and human-made capital are not infinitely substitutable'. Well, so what? Nobody suggested that they were" (Beckerman, 1995, p. 173).

From an outside perspective it is hard to grapple with the debate; the real issue seems to be hidden beneath a heavy use of economic terminology. What is really at stake, it seems, are different views of values: Beckerman takes the standard economic position of welfarism, i.e. human well-being is all that matters, whereas Daly and his fellows argue for a more pluralistic view of values. The debate might be addressed with the question: what gives us reasons to care about the natural world? Thus framed, it is an issue that has been discussed at length in environmental ethics, ecology, and environmental economics. However, with the Brundtland report as a point of departure, the answer is given: "first and foremost our message is directed towards people, whose well-being is the ultimate goal of all environment and development policies" (WCED, 1987, p. xiv). There may be good reasons to challenge the welfarism of the Brundtland report if one understands it as an exhaustive moral theory. No such claims are made, however; it is obvious that sustainable development is a political concept, with a specific, not general, domain.

2.2.3 As Intergenerational Justice

If the discussions in economics have been quite extensive, the reception in the philosophical literature on sustainable development can be said to have been meagre. There are, however, a few notable contributions, which could now be considered in order to move the discussion in that direction.

Brian Barry has suggested that "the question to be asked about the ethical status of sustainability [is the following:] Is sustainability (however we understand the term) either a necessary or a sufficient condition of intergenerational distributive justice?" (Barry, 2003 [1997], p. 488). He begins with, what he calls, "the core concept of sustainability", that is: "[T]here is some X whose value should be maintained, in as far as it lies within our power to do so, into the indefinite future" (Barry, 2003 [1997], p. 491). He then argues that the most reasonable X is defined as some notion of equal opportunities across generations.[11] Maybe one should understand Barry here has taking a step beyond the Brundtland report (Langhelle, 2000, p. 303), in an argument for

[11] Again, as with Beckerman's characterisation of 'strong sustainability', it is not entirely wrong to press 'equal opportunities' in the discussion of sustainable development, but still somewhat misleading.

a stronger conception of sustainability. If so, there might be reasons to be concerned about the feasibility of Barry's position. That is the first issue which can be raised in criticism of Barry's position. The second is that, in framing sustainable development only in terms of intergenerational justice, certain key ideas may be missed, or at least insufficiently dealt with. A salient feature of the Brundtland report is the accentuation of trade-offs between inter- and intra-generational justice, based on the thought that these must be addressed simultaneously. To interpret sustainable development as a pure theory of intergenerational justice misses the complexity and scope of the original idea.

Another analysis that deserves to be mentioned is Oluf Langhelle's insightful explication of sustainable development. It manages to extract the essentials from the original idea and yet connect them to a reasonable philosophical position. He argued that "*Our Common Future* is more coherent and potentially more radical than either adherents or critics seem to be aware of" (Langhelle, 1999, p. 130). Unlike many other interpretations of the Brundtland report, Langhelle is not content with, what many others refer to as the definition of sustainable development: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development (WCED), 1987, p. 43). He draws attention to the qualifications that follow immediately after this quote, namely: "It [i.e., sustainable development] contains within it two key concepts:

- the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs" ((WCED) 1987, p. 43).

On this basis Langhelle presents a clarifying distinction. The objective of development, explicitly stated in the Brundtland report, i.e. "the satisfaction of human needs and aspirations" (World Commission on Environment and Development (WCED), 1987, p. 43), he refers to as the "goal of development". To this he adds the "proviso of sustainability":

> The qualification that this development also must be sustainable is a constraint placed on this goal, meaning that each generation is permitted to pursue its interests only in ways that do not undermine the ability of future generations to meet their own needs (Langhelle, 1999, p. 133).

From what in many eyes has seemed to be an empty political slogan, we now get some ideas – however vague – about action guidance from the concept of sustainable development. Langhelle (1999) quotes Raino Malnes who, in a similar way, argues that "the proviso is entailed by the very goal whose pursuit it constrains" (Malnes, 1990, p. 7). It is presented as an argument of logical steps building up to and explaining the definition and once the goal of development is accepted, and extended over time, that is what we get: if we have these needs and aspirations now, so will future generations have their own. From this, the proviso follows: the pursuit of the goal of development should not undermine the ability of future generations to meet their own needs. Yet another formulation is the following: once the goal of development is recognised as an overarching normative principle, the constraints on its pursuit come after, meaning that it may not be pursued in ways that are undermining over time. The overriding priority to the world's poor is a moral constraint on future development. As such, Langhelle argues, the proviso is not confined to environmental "threats" against the goal of development. Any kind of issue, social or natural, is potentially relevant.

With this analysis, Langhelle is well-equipped to discuss alternative interpretations. We do not need to enter into these debates too much, as they are considered in other parts of this text, it suffices to repeat his contention that sustainable development is more radical than is commonly recognised by either adherents or critics. Obviously nature preservationist interpretations of sustainable development, such as 'strong sustainability', get it wrong from this perspective: there is nothing inherently wrong with environmental pressure or destruction, it is problematic only if it challenges the goal of development. But at the same time the critics are wrong when thinking of sustainable development as detrimentally paired with growth. Langhelle argues that within the proviso of sustainability, the Brundtland report also put "absolute limitations", i.e., "[t]he ultimate limits to global development are said to be determined by two things: the availability of energy and the biosphere's capacity to absorb the by-products of energy use" (Langhelle, 1999, p. 137).[12] These ultimate limits naturally must be heeded in terms of constraints on economic growth.

Based on Langhelle's analysis, I believe it is possible to make sustainable development into a coherent and meaningful concept, but to make sense of it as an ethical framework something more is needed. Langhelle (2000) recognises this in a two-step approach. First, concerning the proviso of sustainability, he argues that it is to be thought of as a necessary condition

[12]World Commission on Environment and Development (WCED) (Cf., 1987, pp. 58f)

for justice.[13] Second, he gives the goal of development a broad, Rawlsian, defence in terms of, what he calls, an "open-ended egalitarianism". In essence, Langhelle argues that the basic needs principle has its justification through the interaction of the following of Rawls's principles: 'the duty of assistance', which comes from Rawls's work on international justice (Rawls, 1999), and 'the just savings principle' from his domestic theory (1971). I believe that this hypothesis of Langhelle is reasonable, although not much more than that, as it stands. It will later be seen that my own, more elaborated, ethical defence of sustainable development also works under a Rawlsian framework.

With this we should now move on to discuss the normative basis of the concept of sustainable development.

2.3 Sustainable Development as a Normative Concept

Sustainable development is a normative concept, the World Commission on Environment and Development was assigned to formulate 'a global agenda for change' (WCED, 1987, p. ix), and this should be made the centre of the discussion. What does this mean for the analysis of the concept? A wide-spread charge is that this makes the concept merely a reflection of the subjective political views of the commission, without further importance. The argument often goes as follows: sustainable development is essentially contestable, there is thus no correct understanding of it, and no sense of having a rational discussion. Michael Jacobs describes this, "policy-technocratic standpoint", as follows: "Sustainable development is never properly defined, it is protested; everybody seems to think it means something different. How can the term be adopted as a policy objective unless its meaning is clarified and agreed upon?" (1999, p. 2) Another common objection is that the commission was unjustifiably given the mandate to dictate what people ought to think and act, that they have falsely claimed to have access to an objective morality.

In this section, I will rebut such accusations. They are not wrong in asserting that sustainable development is an essentially contestable concept (Gallie, 1956), the problem is rather the conclusions drawn from this. To recognise that 'sustainable development', as a social concept, inherently generates disagreement is innocuous, as long as those discussions are rational, meaningful and functional.[14]

[13] Something which Barry, in fact, also argued.

[14] Good examples of such discussions can be found in Langhelle. He asserts that even

2.3.1 Essentially Contestable Concepts

In an article published 1956, Walter Gallie argued that some concepts are properly described as essentially contestable. His argument concerned certain social concepts, such as 'art', 'democracy', and 'justice'. These, he argued, do not have an accepted usage; any definition is disputed. The existence of long-standing arguments over such concepts is, of course, no revolutionising observation, but Gallie inferred something further. He wrote: "I shall try to show that there are disputes, centred on the concepts which I have just mentioned, which are perfectly genuine: which, although not resolvable by argument of any kind, are nevertheless sustained by perfectly respectable arguments and evidence." (Gallie, 1956) How can there be genuine and persistent conflicts, where no involved party is at fault? As Crispin Wright has put it, it seems as if contradiction precludes faultlessness (2010). Gallie's argument could be read as an attempt to preserve a common intuition about such conflicts, namely that they can be genuine and still persistent. His argument is that this category of concepts is of a special kind, allowing us to preserve our linguistic intuitions without logical errors. We could best understand the argument by considering the list of conditions that he took to define this class of concepts.

The conditions are the following: (I) the concept is evaluative/normative (or, in his words, "appraisive"), (II) it characterises a complex phenomenon, which (III) can be given different descriptions, (IV) the concept is "open" in that it can be modified as time and context shift, (V) the parties in the dispute recognise that their respective views are contested. These give us what Gallie calls the "formally defining conditions of essential contestedness" (Gallie, 1956, p. 180) Importantly, but presumably oftentimes neglected in the interpretations of the idea, he adds to this two further conditions in order to distinguish 'essentially contested' from, what he calls, 'radically confused' concepts. The latter category, is meant to describe the use of one and the same word on two quite different kinds of things. He thus adds, (VI) "the derivation of any such concept from an original exemplar whose authority is acknowledged by all the contestant users of the concept", and (VII) that the "continuous competition for acknowledgement as between the contestant users of the concept, enables the original exemplar's achievement to be sustained and/or developed in optimum fashion" (Gallie, 1956, p. 180). Contrary to

though 'sustainable development' is "a contested concept", the "framework" or "key statements" can be found (2000, pp. 298f) Also in Michael Jacobs this is recognised, he writes: "Like other political concepts, it is argued, sustainable development has two levels of meaning. One of these is well defined; the other is the site of political contest." (Jacobs, 1999, p. 2)

the appearance, Gallie's characterisation of essentially contested concepts accordingly does not lead towards conceptual relativism. Even if discussions of such concepts are persistent and with disparate interpretations, they are still about one and the same "original exemplar".[15] Here we need to slightly re-interpret Gallie, in light of a distinction made by Rawls that supplements the understanding (see below); the original exemplar just is the concept and this is recognised by the contesting parties. The disagreement, thus, is not about the concept *per se*, but rather about how it should be 'developed in optimum fashion'.

That said, there are still good grounds for believing that some examples of longstanding discussions in politics and political philosophy reflect merely the appearance of a disagreement, since the disputants do not talk about the same concept at all (although the same word may be used); such discussions are consequently not properly described as being about an essentially contested concept.[16]

2.3.2 Thick and Thin Evaluative Concepts

The first thing we need to address in the discussion of sustainable development, accordingly, is whether or not we are dealing with a 'radically confused concept'. 'Sustainable development' is not *only* an evaluative, i.e. normative, concept, but has some kind of descriptive content as well. One could possibly describe it, applying Bernard Williams's distinction (1985), as being a 'thick' rather than a 'thin' concept, in the sense of having (much) more empirical content than, say, 'right' and 'good'. This opens up the possibility that the disagreement over the meaning of sustainable development may be located in its 'thickness'. That is, maybe it is not the case that the disagreement over sustainable development concerns its normative content, but rather reflects different descriptive functions and applications to the world. This possibility cannot be ruled out; if it is the case, then we are dealing with a 'radically confused concept'. To a certain extent it should be obvious that this is true of

[15] It should be noted, though, that certain interpreters of Gallie's text have gone in another direction. Ernest Gellner claims that "Gallie is, implicitly, betraying his own idea: he talks as if, behind each 'essentially contestable concept', there was, hidden away in some platonic heaven, a non-contested, unambiguously defined and fully determinate concept or exemplar." (quoted from Collier et al., 2006).

[16] An example might be many political discussions using the term freedom. Many times it seems that contestant have in mind quite different social phenomena when they talk about 'freedom of choice', 'freedom of thought', and 'economic freedom', etc.. If this is the case, these discussion would not accurately be characterised as being over an essentially contestable concept. (This does not mean that the concept of freedom, in other contexts, say in philosophy, could not be described as essentially contestable.)

sustainable development. The use of the term has spread immensely, and it is not uncommon to find it applied to the most diverse things (e.g., businesses, universities, cities). Concerning these usages, we should most likely conclude that they do not primarily reflect normative disagreement but rather exhibit a conceptual confusion. For our current purposes, we should just take this as a sign of caution.

Even so, I believe a case could be made that in the mainstream discussion of sustainable development, *most* of the disagreement should be located elsewhere. I will try to show this below. Given that this is the case, it seems reasonable to describe 'sustainable development' as essentially contestable. It allows us to save two features of the discussion of the concept that seem important: the genuine disagreement together with rational and productive future dialogue still being possible.

2.3.3 Moral and Political Constructivism

We have seen how sustainable development is an ambiguous concept and has given rise to value contestation. My aim now is to argue that this does not undermine a constructive, rational, and meaningful debate. More specifically, following the assumed context of the discussion of climate change, I will argue that despite conflicting ideas about what it means to develop in times of climate change, there are points of overlap such that some basic action directives can be deduced. To this end I will make use of an approach to moral and political theory called 'constructivism'. A way of motivating this approach is to treat it as an attempt to present a political conception (of justice, for instance) sensitised to the permanent existence of moral and political disagreement in a pluralist society (Rawls, 2005 [1993], p. 90). It does this by adopting a practical outlook, which avoids claims to moral truths. Unlike in theoretical reasoning, normative disputes are seen as specifications of solutions to practical problems rather than competing descriptions of an independently existing (normative) reality. A normative disagreement, contrary to a descriptive disagreement, is not best explained by there being (approximately) true and false judgements in competition, rather the competing views should be thought of as more or less reasonable, as will be explained below. This allows for the possibility of speaking about objective moral facts without costly metaphysical assumptions. We do not need to close a knowledge gap between normative concepts and a normative reality in order to assert that something is right or wrong, we only need to show that disputants share a common ground for action based upon normative judgements they already embrace.

The term 'moral constructivism', as used in modern moral philosophy,

was first presented in Rawls's article "Kant's Constructivism in Moral Theory" (1980). Rawls there argues that his own theory of justice, 'justice as fairness', as well as Kant's moral theory should be understood as examples of a kind of constructivism.[17] He argues that a political conception, such as 'justice as fairness', must be constructed on basis of conceptions of persons and society as already existing. This means that:

> The search for reasonable grounds for reaching agreement rooted in our conception of ourselves and in our relation to society replaces the search for moral truths interpreted as fixed by a prior and independent order of objects and relations, whether natural or divine, an order apart and distinct from how we conceive of ourselves (Rawls, 1980, p. 519).

It makes moral theorising mundane and gives political philosophy the role:

> to articulate and to make explicit those shared notions and principles thought to be already latent in common sense; or, as is often the case, if common sense is hesitant and uncertain, and doesn't know what to think, to propose to it certain conceptions and principles congenial to its most essential convictions and historical traditions (Rawls, 1980, p. 518).

Once we have worked out conceptions of ourselves and our predicament – the building blocks, as it were – the task is to construct a more principled way of relating them to one another.

It can be noted that the general constructivist approach has since been developed in various ways. The main crossroad is that between a Kantian constructivism, represented by Onora O'Neill (1996) and Christine Korsgaard (1996; 2003; 2009)[18] among others, and a Humean constructivism, represented by Sharon Street (2008) and James Lenman (2010) among others.[19] Yet another constructivism is a kind of contractualism, or as Rawls referred to it in a later work (2005 [1993]): "political constructivism".[20] It should be

[17]Possible precursors mentioned by Rawls, besides Kant, are Thomas Hobbes and Jean-Jacques Rousseau. For other alternatives see below.

[18]A closely related position is that of "constitutivism", which in essence argues that categorical moral requirements can be derived from constitutive features of agency and that agency is non-optional. This view has been defended by Korsgaard (1996; 2009) and David Velleman (1996) among others. See also the criticism presented by David Enoch (2006).

[19]One could also mention a Hobbesian constructivism, represented by David Gauthier (1986).

[20]It is possible to describe Thomas Scanlon's view in *What We Owe to Each Other*

mentioned, though, that whereas actual or hypothetical agreement is essential to contractualism, this is not so in general for constructivism (O'Neill, 2003; cf., Street, 2008, fn. 12). A relevant distinction in the understanding of these developments of constructivism is that between, what Street calls, "restrictive" and "thoroughgoing" constructivism (Street, 2008), alternatively, in Lenman's and Shemmer's terms, "local" and "global" constructivism (2012). The former, which can be exemplified by Rawls and Scanlon respectively, is constructivist only with regards to some restricted subset of normative judgements (e.g. judgements about justice, or about "what we owe to each other"), whereas the latter, exemplified by Korsgaard (e.g., 2003, pp. 117-8), applies the constructivist method to the whole domain of normativity. In this thesis there is no need to set out the more ambitious thoroughgoing version; if we can construct a principled way of handling climate change within the subset of normative judgements relevant to development practices we should be content. Neither do we need to choose between the different versions of constructivism at this stage, as the resources drawn from constructivism are independent of more specific interpretations.[21]

It is now time to explain the general features of the constructivist approach as a useful resource for this thesis. As has been hinted already, a way of presenting it is to contrast it with moral realism (e.g., Street, 2006). Constructivism can thus be thought of as a rejection or bracketing, of moral realism, but one which does not involve thereby retreating to a traditional moral anti-realist position (e.g., moral noncognitivism or moral error theory) or giving up on objectivity (e.g. moral subjectivism) (cf., O'Neill, 2003, p. 321). The anti-realist position of moral constructivism is not an infallibilism; as Street puts it "[w]hile there are, ultimately, no normative truths that hold independently of our evaluative attitudes – while normative realism is false, in other words – it does not follow that it's impossible to go wrong with one's normative judgements" (2008, p. 207). An agent can make mistakes in her normative and moral judgements, according to generic constructivism, this happen when s/he fails as judged by a standard of correctness s/he has set for him/herself by some other normative judgements. In fact, constructivism may thus be defined:

> *constructivist views in ethics* understand the correctness or incorrectness of some (specified) set of normative judgements as a question

(1998) as a kind of political constructivism, despite the fact that his stated concern is with moral, rather than political, rights and wrongs.

[21] In the following chapter I will, however, point to a difference between a broad Kantian and Humean interpretation in relation to the understanding of the normative force of basic needs.

> of whether those judgements withstand some (specified) procedure of scrutiny from the standpoint of some (specified) set of further normative judgements (Street, 2008, p. 208).

The main point here is that there is a procedure of reflective scrutiny that determines or constitutes moral facts, or gives certain facts the status of being moral facts; there are no moral facts prior to or independent of this procedure (Rawls, 1980, p. 519). Consequently, the procedure should not be thought of as an epistemic device that indicates or tracks independently existing moral truths.

A second feature of constructivism is that the procedure of reflective scrutiny is carried out from a "practical point of view" (Street, 2008, p. 209). This is the perspective "characteristic of a deliberating agent, subject to all the motivating states agents are subject to: desires, plans, intentions, and, perhaps in particular where constructivists are concerned, normative and evaluative judgements" (Lenman and Shemmer, 2012, p. 3). These states, or at least the normative judgements that we will focus on here, can be thought of as "possibilities of construction" (Rawls, 2005 [1993], p. 123). It is through the reflective scrutiny we expose them to that their relative weight as reasons are determined. In other words, it is in this process that normative principles are constructed. As such, it is normative scrutiny – parallel to the method of "reflective equilibrium" (Rawls, 1971; Daniels, 2011) – as opposed to a reductive analysis. The justificatory process of the reflective scrutiny roughly consists in working back and forth among our considered normative judgements in order to achieve coherence.

A third feature is the adoption of a first-person, rather than third-person, standpoint.[22] This feature can be thought to distinguish constructivism from most, otherwise rather similar, expressivist views in meta-ethics. Street describes the adoption of the first-person perspective well in the following quote:

> [R]estricted versions of constructivism can appear to be straightforward exercises in normative reasoning: they address those of us who endorse the relevant grounding set of judgements, and argue that we have reason to accept the target judgements; they identify certain reasons or values that we, the audience, accept, and try to show us that from these materials, certain results flow (2008, p. 218).

This perspective has several implications, but most importantly it means

[22]It should be noted that I make no difference between the "practical point of view" and the "first-person standpoint" – they are one and the same perspective illuminated in two ways.

that normative judgements must be made from somewhere, it is only in the role as an agent adopting the practical point of view that normativity exists. That we have moral reasons to act in various ways is to be understood from this practical perspective, in fact it cannot be understood in any other way; in the words of Korsgaard, "it is only viewed from the perspective of those who actually *face* those problems in question that these truths will appear normative. Viewed from outside of that perspective, those who utter these truths will appear to be simply expressing their values" (2003, p. 118).

To illuminate matters, we can briefly consider Rawls's application of a constructivist approach in the vindication of his 'justice as fairness'. Based on the assumption of what he called "reasonable pluralism" his idea was to present a political conception of justice that was agreeable from a plurality of comprehensive but reasonable moral, religious and philosophical doctrines. As competing comprehensive doctrines found in a society can reasonably disagree about an external moral reality, the basic structure of that society must be worked out in light of (normative) conceptions of people and society shared in such a liberal society. More specifically, justice as fairness assumes that citizens of a well-ordered society are free and equal, and that a society is a fair system of cooperation stably persisting over time. In Street's terminology (2008) these assumptions are the "grounding set of normative judgement", i.e. the normative input. They should be distinguished from the "targeted set of normative judgement", which is the restricted class of normative judgements now up for scrutiny, which in Rawls's case is judgements about justice in a liberal society. The original position is Rawls's "procedure of construction", and the two principles of justice, i.e. justice as fairness, is the "result of construction" (Street, 2008, pp. 210f), i.e. the normative output.

At this point we can usefully connect Gallie's idea about essentially contestable concepts presented above, to a distinction of Rawls's (1971), between concept and conception. The concept of justice thus is the practical problem free and equal citizens face in a society – i.e. how can each and everyone pursue his or her conception of the good while leaving each as free as possible (cf., Korsgaard, 2003, p. 115) – on the basis of which different conceptions of justice (e.g. 'justice as fairness') can be proposed. Christine Korsgaard helpfully explains this method of Rawls: "The concepts of moral and political philosophy are the names of [practical] problems, or more precisely of their solution", and continues, "[t]he concept *refers* to *whatever solves the problem*, the conception proposes a particular solution" (2003, pp. 115f).

Thus presented constructivism may seem hopelessly question-begging. Continuing with the example of Rawls, his principles of justice are the outcome of a procedure set up to generate just that kind of solution; roughly,

if we accept the problem-formulation presented above as the one that Rawls is addressing, then the solution that everyone must be maximally free and that primary social goods should be distributed to the benefit of all (as is the most general formulation of his principles), may seem disappointing – it is as if the conclusion was already assumed. In the words of Korsgaard: "the content of Rawls's two principles of simply reflect this conception of the problem. So Rawls's two principles simply describe what a liberal society must do in order to *be* a liberal society [...]" (2003, p. 115). It should first be noted that even if constructivism was circular, it would not necessarily be problematic: it is only against a vicious circularity that a defence is needed. This is not the place to fully address this question, but it can be said that the general strategy for answering this challenge is to keep the material of construction, i.e. the grounding set of normative judgements, apart from the result of the construction, i.e. the targeted set of normative judgements (Street, 2008, p. 215). If the restricted set of normative judgements scrutinised (in Rawls's case judgements about justice) is clearly separated from some other set of normative judgements used as a standard to evaluate these (i.e. conceptions of persons and society), no vicious circularity is provoked.

Let us now return to the concept of sustainable development and think about how it can be elucidated with the resources just presented. Basically, I will argue that sustainable development is the name of the solution to a practical problem. The problem is found in connection to normative judgements assumed in development practices, which below will be defined as something similar to 'future-oriented activities and aspirations reflectively contemplated'. The relevant questions to pose on this understanding of the normativity of the concept of sustainable development are the following. First, whose problem is it that we are looking for? Second, what is the problem to which sustainable development is the solution? Third, what conception of sustainable development is the best solution? The natural starting point thus is in the first two questions, which concern the concept of a sustainable development. At a later stage, when we have made the problem more concrete, we can hope also to provide a suitable conception.

Another reason for this priority is that we need to address the conceptual worries alluded to above in order to make the concept meaningful in the first place. The distinction between concept/conception and the constructivist method help us towards that end. The possibilities of providing a definition are greater when we are not trying to capture or describe something as queer as a humanly independent normative reality, but instead a constructed social reality. In other words, when the search for a definition is not the quest of unraveling a universal and eternal truth about the world, nor the determination of a necessary trajectory to which we must succumb; but instead involves

thinking hard about the problem/s to which sustainable development might be the solution. The constructivist understanding of normative concepts brings out the practical dimension – sustainable development as a call for action – of the discussion. Finally, and perhaps most importantly in the context we have assumed, the notion of objectivity developed offers a way out of a political stalemate in the debate about the distribution of responsibility for addressing climate change. Instead of motivating action on basis of any contentious comprehensive moral doctrine – such as the utilitarianism of environmental economics, or the strict deontological reasoning of some environmental ethicists – the argument here is that we have objective moral reasons to do something about climate change in virtue of normative judgements widely shared in development practices. Expressed in Rawls's well-known words (2005 [1993], p. 97): it is a "political and not metaphysical" conception of climate justice. In this way we can account for meaningfulness of normative disagreement, whilst avoiding affirming passivity.

The plan for this thesis is to make use of the constructivist method in its broad Rawlsian costume but further specified when needed. This does not mean that we shall assume any other parts of Rawls's theory of justice; it is merely the approach, or method, in itself that will be adopted. As will be pointed out in several places – noticeably in chapter five – I believe that the practical problem that is being addressed in this thesis is substantially different from the one Rawls assumed. Commonly, however, we will work towards a conception of climate justice on the basis of the conceptions of the agent and the specific situation faced. The following two chapters are attempts to draw attention to some salient features of conceptions of development, in particular what role basic needs play. In these conceptualisations we will narrow down the way in which climate justice can be constructed on the basis of development practices, and slowly work towards a more determined account. In other words, the objective of this thesis is to give a partial description, i.e. one sufficient for the problem addressed, of the agents and situation in order to vindicate fitting principles of practical reason.

2.3.4 The Concept of Sustainable Development

It is, thus, time to specify this problem. It should again be emphasised that it is a practical problem, an obstacle to successful action, that we are looking for. The problem needs to be rather carefully spelled out, since its characteristics will give us an idea about its solution. It is, accordingly, not a good idea to begin listing global concerns in general (e.g., poverty, violations of human rights, environmental vulnerability, etc.). Any such attempt runs the risk of arbitrarily excluding or including something. Furthermore, such

global issues – however pressing and deserving of attention they are – are not in the right form of a practical problem. We are led wrong if we think of sustainable development as the answer to all conceivable problems world-wide; it will not be helpful to think of it as a *panacea*. Instead we should follow the constructivist methodology provided in the previous section.

To begin with, we must ask: whose problem is it? In other words, to whom is the problem of sustainable development addressed? In the Brundtland report the answer to this is somewhat ambiguous. The general impression – in a way assumed by the fact that the commission was given a mandate from UN – is that the addressees are nation-states. Even if much emphasis is laid on the need for multilateralism, international cooperation and the need to move beyond national sovereignty (World Commission on Environment and Development (WCED), 1987, p. x), it is still maintained that "[t]he Commission is addressing governments, directly and through their various agencies and ministries. The congregation of governments, gathered in the General Assembly of the United Nations, will be the main recipient of this report" (World Commission on Environment and Development (WCED), 1987, p. xiv). Thinking about the specific issue of climate change, then, makes it natural to see the call for the creation of a sustainable development as nowadays primarily relevant for the negotiating parties of the United Nations Framework Convention on Climate Change (UNFCCC). It should be mentioned, though, that the Commission also points towards a more generalised idea. Most importantly, it can be read that: "first and foremost our message is directed towards people, whose well-being is the ultimate goal of all environment and development policies" (World Commission on Environment and Development (WCED), 1987, p. xiv). And that "[t]he changes in human attitudes that we call for depend on a vast campaign of education, debate, and public participation" (World Commission on Environment and Development (WCED), 1987, p. 23), which suggests that the problem discussed is much more general than one only for international politics. This more general vantage point is also explicitly stated in talk about "addressing private enterprise, from the one-person business to the great multinational company" (World Commission on Environment and Development (WCED), 1987, p. xiv). For the purpose of this thesis, and the construction of sustainable development conducted, we do not need a fully determinate answer to the question asked in this paragraph. What is important though is that it is someone's, not anyone's, problem that we discuss; in other words, it is a problem from somewhere.

With this in mind it is time to present the outline of the problem. Now it may seem problematic to assume that it is *a* problem (in singular rather than plural) that we are looking for. Is it really the case that there is such a general

problem shared by people, nation states, businesses, etc. all over the world? I think that this must be assumed to understand the motivation behind, and meaningfulness of, sustainable development. Fortunately, I also think that the Commission has provided the outline of such a globally shared problem formulation. We must work our way up to this formulation carefully though in order to make sense of it. The keywords will be globalisation and ecological integration. Much has been said about globalisation and I will not try to fully summarise those debates. What is important here is that we live in a more integrated world today than our ancestors did before. Cultural, economical, ecological and social exchanges take place at different scales than they did further back in history. The Commission, in line with many environmentalists, refers to the first pictures of the Earth taken from outer space in the late 1960s and early 1970s[23] to epitomise this event: "[f]rom space, we can see and study the Earth as an organism whose health depends on the health of all its parts" (World Commission on Environment and Development (WCED), 1987, p. 1). We should not read to much into this metaphor, but there is something awe-inspiring about this above-and-from-the-outside perspective. It speaks to the idea of a shared destiny, a need for cooperation and mutual respect.

Even if there is no specific date that marks the beginning of globalisation, it is clear that individual aspirations and hopes for a better future today are highly dependent on the activities of others. The basic underlying idea is further clarified by the conceptions of 'development' and 'environment' assumed by the Commission:

> "The word 'development' has also been narrowed by some into a very limited focus, along the lines of 'what poor nations should do to become richer', and thus again is automatically dismissed by many in the international arena as being a concern of specialists, of those involved in questions of 'development assistance'. But *the 'environment' is where we all live; and 'development' is what we all do in attempting to improve our lot within that abode.* The two are inseparable" (emphasis added, World Commission on Environment and Development (WCED), 1987, p. xi)

On this basis one could argue that the root of the problem of development is the "discovery" that human aspirations for a good life are shared globally. Building on that, one could perhaps argue that the problem to which *sustainable*

[23]The two most famous pictures are the "Earthrise", taken on the Apollo 8 mission in 1968, which was the first picture of the Earth from space, and the "Blue Marble", taken on the Apollo 17 mission in 1972, which was the first picture of the Earth as a whole.

development is addressed comes from the further insight that our collective aspirations are likely to undermine the aspirations of others.[24] As the world becomes more and more global, it has become more evident that our ways of living are embedded in a larger global whole.

Climate change is a prime example of this. Carbon emissions transcend both spatial and temporal boundaries; carbon emitted today will contribute to effects felt across the globe in the future. In this way climate change makes us interlinked, over space – internationally – and over time – intergenerationally. This connection is prominent in the Brundtland report:

> Until recently, the planet was a large world in which human activities and their effects were neatly compartmentalized within nations, within sectors (energy, agriculture, trade), and within broad areas of concern (environmental, economic, social). These compartments have begun to dissolve [—] These related changes have locked the global economy and global ecology together in new ways. [—] We are now forced to accustom ourselves to an accelerating ecological interdependence among nations. (WCED, 1987, pp. 4f)

Together with the natural extrapolation, that if we (or: I)[25] have these aspirations and ways of lives, others (now and tomorrow) will in all likelihood have them too, the practical problem presents itself as a kind of balancing problem. We need to know upon which conditions these human aspirations are based, and with them as our baseline consider acceptable trade offs of other parts of human ways of life. We need to find *a morally acceptable compromise between living conditions globally and over time*, or, in other words, ways of making development sustainable. Roughly translated to a general problem description: *how can we engage in future-oriented activities and aspirations without at the same time denying others that opportunity?* This, I would argue, is the problem which the concept of sustainable development is supposed to answer.

To clarify the structure just presented, it can be contrasted to an analysis of the more general concept of development, provided by Nigel Dower. Just as 'sustainable development', 'development' is an essentially contestable concept, aptly characterised in Dower's constructivist approach. He writes:

[24] Naturally, this account of the root of the problem is speculative. The full explanation must be searched in the empirical social sciences, among historians for instance.

[25] I will use 'we' as a place-holder here for the relevant moral agent faced with the practical problem. Following the discussion above about whose problem it is that we discuss, this 'we' might just as well be replaced with an 'I'. For simplicity much of the discussion will be conducted from the position of a nation-state, referred to as "we".

> Briefly we can distinguish between a formal or 'thin'[26] definition (the concept) of development as a 'process of socio-economic change which ought to happen' and various substantive or 'thick' definitions (conceptions) which, in terms of the values of the proponents, represent what they think ought to happen (Dower, 2000, p. 44).

Unsurprisingly, I believe that this analysis is on the right track: it brings out the constructive yet evaluative disputes over development through the distinction between concept and conception. What I take to be a weakness is that some of the basic features of the constructivist approach, as defined above, are missing. In particular, when Dower presents the concept of development, one gets the impression that it is something essential about societies, rather than being a solution to a specific practical problem faced. This kind of perspective-less presentation of the concept of development is unconvincing, and would need to be supplemented with an explanation of the roots of the problem.

Let us now return to the question of essential contestability. Although certain of the characteristics presented by Gallie could be used to describe the concept of sustainable development as it has been presented here – it certainly has an evaluative and open character, for instance – this is most likely not the proper test of what we are looking for. What we want to ponder at this stage is whether it might reasonably be expected to play a practical role; or, in other words, if the problem to which it suggests a solution can eventually be overcome and successful action be expected. If persistent and genuine disagreement exist on a conceptual level this would seem to be a huge obstacle to such advancements. Obviously Gallie's argument can be interpreted differently, especially with regards to the fourth and fifth conditions. I think a case can be made that his analysis fits well with the kind of constructivist view of normative concepts that I have been presenting here. If this can be accepted, a small nuance shift is needed in Gallie's categorisation: it is not the concepts that are contestable, rather their conceptions. This opens up for a possibility to capture a formal and essential definition of a social concept. However only as an abstract idea flowing from the nature of the practical problem that stands before us; it would not tell us exactly which actions we need to take or give us an order of priority.

[26]Dower's use of 'thin' and 'thick' is confusing. The thought inevitably leads towards Williams's distinction (presented above), but if this is how we should understand Dower then he has inverted the original meaning of those terms. It seems as if Dower begins with the 'thin' social reality, which is 'thickened' by the specification of a particular value system. Normally, and according to Williams's use, one thinks of pure ethical systems as being 'thin', whereas the world (before ethical reflection) contains 'thick' evaluative concepts.

Just as with Dower's definition of development, the concept of sustainable development provided here is not complete. At this stage it is merely an abstract idea generated by the kind of practical problem described above; it is not something that could actually guide action. In order to apply such a concept, we need conceptions of development: what does a 'morally acceptable compromise' mean? This task could be thought of as belonging to practical philosophy as the study of values underlying action. My proposal is that what is commonly referred to as the Brundtland definition of sustainable development is such a conception. In the coming chapters, the aim is to assess whether it is the most reasonable conception, and if so by which standards. I will just conclude this section by stressing that we could include the "essential contestability" of development without having to retreat to conceptual relativism or give up rational argumentation. With the distinction between concept and conception, the normative disagreement is properly located in the different conceptions of the abstract concept of sustainable development.

2.4 Conclusion

Let us thus sum up this chapter. We began with the conceptual confusion, ambiguity, and seemingly impossibility of using the concept of sustainable development to motivate political action. Following that a brief historical review of the introduction of the concept was presented to provide a context. Its reception among economists and philosophers was then introduced. We saw that many of the numerous interpretations of the concept misconstrued the underlying normative ground. On most occasions the failure came from mistaken views about normative concepts, some times from misunderstandings of sustainable development as a thesis only about physical endurance. A general explanation of confusions is the search for rules of application, or operational definitions, rather than explications sensitive to the full picture. The philosophical reception of the concept of sustainable development was then presented. It gave us an idea of a more informed interpretation, though left it in an embryonic state.

In order to accommodate the rational argumentation of the meaning and evaluative character of the concept of sustainable development, a constructivist approach to it was then proposed. It was argued that we should understand sustainable development as an essentially contestable concept, where this concept is the abstract solution to a practical problem. A general problem shared by all relevant agents engaged in development-oriented activities widely construed was argued to form the basis of the concept of *sustainable*

development. The problem proposed was nothing less than 'how can we engage in future-oriented activities and aspirations without at the same time denying others that opportunity?' The answer from the Brundtland report can then be understood as a call to make development sustainable, or, in other words, to find a morally acceptable and stable way of meeting present aspirations, needs and desires for improvement. I argued that this, the concept of a sustainable development, is not generally questioned, nor is it the main target for the heated debates in its ripples.

Even so, we contend, this only gives us a vague idea of which choices and trade-offs we are morally required to make and accept. The full answer must come pending a more specific conception of sustainable development. Following on the constructivist methodology presented in this chapter, it can be said that we need to consider the grounding set of normative judgements before any principled and specific directions can take form. The Brundtland report can be thought of as giving the outline of such a set of conceptions in the overriding importance of the needs of the world's poor and the idea of limits to development. The following chapters attempt to address these in greater detail.

Chapter 3

Needs

> *We call NECESSARY (a) that without which, as a joint cause, it is not possible to live, as for instance breathing and nourishment are necessary for an animal, because it is incapable of existing without them: and (b) anything without which it is not possible for good to exist or come to be, or for bad to be discarded or got rid of, as for instance drinking medicine is necessary so as not to be ill, and sailing to Aegina so as to get money.*
>
> — Aristotle 1993, *Metaphysics*,V.1015a20 (trans. Kirwan)[1]

The concept of needs is proclaimed to be a "key concept" in the Brundtland conception of sustainable development, and "in particular the essential needs of the world's poor, to which overriding priority should be given" (World Commission on Environment and Development (WCED), 1987, p. 43). In the philosophical project undertaken here, we must ask: what reasons do we have to prioritise needs in that way? In order to answer that, we must pose a further question about the meaning of the concept of needs, and how it should be defined. Furthermore, and as an extension of the question of its meaning, we must inquire about the moral importance of needs in comparison to other similar concepts, such as desires, wants, and preferences.[2] These are questions that must be answered as part of the specification of the conception of sustainable development and the evaluation of its prospects as an approach to climate justice.

Why not just accept needs provision as a goal and focus on the means of realising it instead? Surely this is commonplace in politics. A vague idea of a goal is assumed and does not play any substantial role as the discussion

[1] Quoted from Wiggins (1998).

[2] This question will only partly be answered here, but will be examined in greater depth in the chapter that follows.

progresses.[3] But given the witnessed disagreement and persistent passivity, such an approach seems questionable in the context of climate change politics. Maybe we should even claim that it is wrong-headed; an instance of putting the cart before the horse. Such a working order invites misunderstandings, as we saw in the previous chapter. One such example, which will later be developed, is Wilfred Beckerman's dismissal of the Brundtland definition of sustainable development as a "useless criterion". He argued that needs are "subjective", thus infinitely variable over time and space and hence impossible to ground policy on. Section 3.3.1 specifically addresses this argument. For the moment, I will only use this claim as a motivation for the undertakings of this chapter. The concept of needs is far from straight-forward to understand, gives rise to misunderstandings and hasty dismissals, and thus must be carefully spelled out.

Another motivation for the chapter concerns the relation between meeting needs, on the one hand, and environmental/physical sustainability on the other hand. The issue could be put as follows: is needs provision the solution in sustainable development, or rather part of the problem addressed? In other words, what is the relation between social justice and environmental concern? Ever since the publication of the Brundtland report this issue of whether the relationship is one of synergy or tension has been frequently debated. The short answer is that it all depends on which needs we refer to – "consumption needs" (which can be thought of as a specific instance of what I will later call "volitional needs") generated by constantly renewed material desires are quite different from "survival needs", such as for nutritious food and water. The relation between social justice and environmental concern is not only an empirical question, part of the answer lies in this conceptual investigation.

The structure of the chapter is as follows. I begin with an analysis of the concept of needs where I sort out different senses that are of no interest in the context. As with many other social concepts, 'needs' is ambiguous and has to be clarified before it can be meaningfully used. The most interesting distinction with respect to the construction of a sustainable development, is that between 'volitional' and 'basic needs'. This distinction has been used by some to argue for a 'principle of precedence', which states that some needs are morally more important than others. This principle is discussed in section 3.1.1. I will argue that there is a way of making sense of this principle which has not been satisfactorily developed in the existing discussion. While

[3]This could be exemplified with the 'basic needs approach' to poverty alleviation of Streeten et al. (1981). At the beginning of their study they provide a (probably too ambitious) definition of a basic needs approach: it "attempts to provide the opportunities for the full physical, mental, and social development of the human personality" (1981, p. 33), which then does not play any role in the empirical discussions of the book.

hitherto this principle has mostly been taken as given, it really requires an argument which shows that the reasons for meeting (basic) needs trump other concerns. Neither will it do to assume that basic needs are of overriding importance because of to the harm caused by an unmet need. This is too indeterminate: it does not give us the relative importance of needs and thus the input required for a priority ordering needed to ground a principle. The next step is thus to push the question further to provide an account of harm. This is done in section 3.2. When does an agent suffer serious harm and what does that amount to? It seems that not every need compels action[4], but some do. Loosely speaking, the reasons provided must be sufficiently forceful or persuasive if indeed there is an outstanding moral strength of basic needs. It is unclear what degree of seriousness (if any) will turn needs provision from acts of voluntariness to acts of (moral) necessity: death, loss of agency, loss of human dignity, loss self-respect, etc.. In sections 3.2.1, we will look for a ground from which we can infer that a need intended to satisfy one of these important ends, just has to be met. Harms inflicted by unmet needs are more or less serious, and the reasons provided more or less compelling, but some outer limits at least can be presented on a constructivist basis. A more exhaustive answer will have to wait until the next chapter though. Finally, in section 3.3, some general features of the argued for sense of needs are drawn out: the objectivity of needs, the relation to different practical and normative constraints, and the relation to physical sustainability.

3.1 Analysing the Concept of Needs

A characteristic feature of the concept of needs is that it has a relatively close relation to ordinary language use. Most people have a fairly clear idea about needs, when s/he is in need of something. We conclude by the bark of the dog[5] that it needs to be walked, and can most of the time tell by the tone of voice that we have neglected a friend and now need to spend more time with her. This common sense of needs marks a clear difference from other comparable philosophical concepts, such as desires or preferences, which have a more technical character. However, this is not to say that the concept of needs is well understood, or that it is used in a coherent way in ordinary

[4] I want some coffee, the only way of getting coffee is to go to the coffee shop, so I need to go to the coffee shop. But I do not *really need* to go to there, and you do not need to assist me. I might as well give up the idea, or have a cup of tea instead.

[5] There is nothing that precludes us from talking about normatively important needs of conscious animals in general. Further down the chapter, we will see – even if it is not explicitly argued for – that a certain class of needs, which is applicable to animals and humans alike, gives us strong reasons to act.

language. We should be aware of the many different uses of 'needs', and thus begin with a few important distinctions.[6]

First we must sort out some irrelevant senses of needs. Consider the following sentences:

A.'A triangle needs to have three sides' (Necessity)
B. 'A heroin addict needs to have an injection each day' (Drives)
C. 'You need a Blue-ray player to watch those new movies' (Volitional)
D. 'I am in need of your consultancy' (Noun)

The usage furthest away from the one of interest in this text probably is A. A simply expresses a necessary relation between being a triangle and having three sides; it does not have any normative implications and, furthermore, it does not entail a noun (it is not the case that the triangle *has* a need for three sides). The use of 'needs' as a verb, as in A, makes good sense when attributing 'needs' to inanimate things (such as triangles). However, this is not true of its use as a noun; the existence of such a need can only be true of living creatures. So when talking about the possible existence of needs, and claims about needs, we must be careful to distinguish the sense of mere necessity. Then, consider B, which is common in psychological theories – such as the famous 'Maslow's hierarchy of needs'. The problem with such an analysis of needs is that it confuses needs with drives, two quite different concepts, although occasionally co-existing. It is both possible to have a drive for something which is not needed – as is the case in B – and to need something without feeling any inclination towards it (cf., Thomson, 1987, p. 13). When, as in C, 'need' is used in a strictly instrumental sense the meaning of the word does not have any normative implications. That 'you need a Blue-ray player' does not follow from an assent to C; the antecedent is merely conditional upon your desire to 'watch those new movies'. In a manner it should be treated as A; it states a necessary condition for the consequent. What separates C from A though, is that it is derivatively normative. Depending on the strength of your desire for the consequent, you ought to desire the antecedent accordingly; in other words, volitional needs convey value, although merely of an instrumental kind. To need something in this sense is nothing more than to want something and derivatively want the means to bring that about. To need something in this sense has no moral significance above wanting the same thing. Harry Frankfurt illustrates this well: "[t]he claim of a person who needs a dictionary merely in order to gratify his whim to finish a puzzle is no weightier than the claim of someone who

[6]The following distinctions draws on Garrett Thomson's (1987) important book on the subject of needs.

has no specific need for a dictionary but whose desire it is, for no particular reason, to possess one" (Frankfurt, 1984, p. 3).

The sceptic might now infer: is it not the case that all 'need'-uses are instrumental; that you always need something *in order for something else*? This is a stumbling block in the characterisation of the concept of a need, and it could be said that the sceptic is both right and wrong in that worry.

3.1.1 Basic Needs and the Principle of Precedence

In the existing literature on the concept of needs, one usually finds a distinction between two senses of needs: 'basic' and 'volitional'[7]. It is commonly argued that the former is quite different from the latter sense because such needs convey a much stronger moral value. Examples of this are often needs for the necessities for survival, e.g.:

E. 'P needs nutritious food in order to survive' (Basic)
F. 'P needs fresh drinking water' (Elliptical)

Even when expressed in an elliptical form, as in F, it is quite clear that they share a structural similarity with volitional needs: they are derivative. One could thus conclude, with Frankfurt, that "[n]othing is needed except for the sake of an end for which it is indispensable. The moral importance of meeting or of not meeting a need must therefore be wholly derivative from the importance of the end which gives rise to it" (Frankfurt, 1984, p. 2). Of course, this is only true when talking of indispensable needs, such as water for alleviating thirst. When there is an end for which there is but one way of securing, then the value of the end is fully transferred to that means. Now, we know that this is not the case with thirst; thirst may be quenched not only by pure water, but just as well by products containing water, such as lemonade. While there are no products not containing water that could satisfy the need, there are different lemonades (and other watery products). Thus, on an abstract level, the value of thirst-quenching transfers fully to the need of water, while it only partially transfers to the need for lemonade.[8]

[7]Variously the distinction is referred to as between 'fundamental' and 'instrumental' needs (Thomson, 1987); 'course-of-life' and 'adventitious' needs (Braybrooke, 1987); 'absolute' and 'instrumental' needs (Wiggins, 1998); 'nonvolitional' and 'volitional' needs (Frankfurt, 1984); 'contingent' and 'non-contingent' needs (Reader and Brock, 2004).

[8]It can also be noted that wants and desires may not be transferable between contexts at all, although needs surely are. It is true that, if A needs X, and X=Y, then A needs Y. While it is false that, if A desires X, and X=Y, then A desires Y. How is that? To need something is an objective condition of the world, rather than a subjective state. To want or desire something, on the other hand, is an intentional act, directed towards a specific

Some scholars (Thomson, 1987; Braybrooke, 1987; Wiggins, 1998) have drawn a much stronger conclusion from these conceptual analyses. They have argued that an overriding moral importance, which trumps other considerations, is contained in the meaning of 'needs'. A basic need should not only be understood as being instrumental to an end; when one (basically) needs X, one needs X full stop. The argument goes, when talking about volitional needs, e.g. 'P needs to make more money in order to afford a new car', it is intelligible to ask 'but do you need the end (a new car)?'; but at some stage this relational inquiry comes to an end, where the thing needed just is needed. To go on from sentence E above ('P needs nutritious food in order to survive'), and query 'but does P need to survive?' does not make sense, it is argued (Wiggins, 1998; Braybrooke, 1987). One could construct a test of basic needs using this information: what separates a basic need from a non-basic need is that for a true statement of a basic need, as opposed to a true statement of a non-basic need, the further question: but do you *really* need X, is closed. If it is true that 'P needs nutritious food in order to survive', then, necessarily, P needs nutritious food. Obviously this does not hold for non-basic needs, as already said; we cannot conclude that you need a Blue-Ray player even if C is true. That basic needs are indispensable, whereas volitional needs are not, is argued to be a conceptual truth. In the words of Wiggins, while the end-goal or purpose for a non-basic need may be almost anything; "there is another sense of 'need' by which the purpose is already fixed, and fixed in virtue of the meaning of the word" (Wiggins, 1998, p. 9). Can we accept this analysis?

Let us spell it out in more detail first. It is uncontroversial to accept that basic needs are inherently normative, convey norms and give us reasons to act. As with sentences E and F, to grasp the meaning of them is to see reasons

object (Cf., Wiggins, 1998, p. 6). Possibly the difference could be understood in terms of the distinction between *de dicto* (i.e. 'of the word') and *de re* (i.e. 'of the thing'). The suggestion would then be that whereas desires can be either de re or de dicto, all needs (of some not yet specified class of needs) are de dicto. Say that a glass of what seems to be lemonade stands before me and consider two cases. In the first, I want to drink the glass because of a (de re) desire of mine, and, in the second case, I (de dicto) need to drink the glass in order to quench my thirst. Then, in the first case it is not necessarily true that I want to drink the glass on finding out that it really contains lemon water (which, let us assume, is less sweet than lemonade); in the second case, however, it is still true that I need to drink the glass irrespectively of whether it is lemonade or lemon water, given that either could quench my first. On this interpretation, the (de dicto) need is not directed against any specific object in the world, but more generally states a need for any satisfier. De re desires, on the contrary, are directed at specific intentional objects. This would also make statements of desires (unlike needs) based on so-called "referentially opaque contexts", such that co-referential expressions cannot easily be substituted (e.g. 'I want lemonade' may be true while 'I want lemon soda' false, even though they are co-referential).

to meet the need in question. But this is not a feature only of basic needs, the same holds true of volitional needs. The normativity of the means/end relation is widely recognised, for instance, in Kant's 'hypothetical imperative': to will an end is to see a reason to will the means necessary for reaching that end. The question thus has to be: does it make a moral difference to replace 'needs' with 'wants' or 'desires' in the considered expressions ('P wants to have some nutritious food' or 'P desires some fresh drinking water')? If we turn to ordinary language use, or common intuitions, it does seem to matter. To assert that something is needed is generally considered to carry more moral (or perhaps only 'rhetorical') weight, and urgency, than to say that it is desired. Frankfurt formulates it as the 'Principle of Precedence': "*when there is a competition between a desire and a need for the same thing, the need starts with a certain moral edge*" (emphasis added 1984, p. 3). Still, as thesis based only on language use, it is an unsatisfactory explanation; we cannot infer from this that needs claims have a moral priority without further arguments.

This is a weakness in existing analyses, such as:

> **Thomson's analysis of 'needs':** "A needs X (normative) if and only if A needs X (non-normative) in order to ϕ and ϕ-ing is vitally important" (Thomson, 1987, p. 6).

> **Wiggins's analysis of 'needs':** "I need [absolutely] to have x
> if and only if
> I need [instrumentally] to have x if I am to avoid being harmed
> if and only if
> It is necessary, things being what they actually are, that if I avoid being harmed then I have x" (Wiggins, 1998, p. 10).

Commonly the distinction between an instrumental and a non-instrumental sense of needs is made, where the end of a need of the latter kind is suggested to be of distinctive moral importance. To have a basic need met is necessary for something "vitally important" or for the avoidance of harm.[9] The weak point is that the explanation as to why this sense of 'needs' is morally distinctive, supposedly captured in terms of the 'vitally important' or the 'harm', is

[9]Thomson's analysis is preferable when it comes to clarity. Although both the analyses are in need of complement, Wiggins's attempt seems to overcomplicate the matter without gaining too much explanatory force. The essential part of these analyses is captured in a simple sentence from Joel Feinberg, actually quoted in (Wiggins, 1998, p. 7, fn.10): "In a general sense to say that S needs X is to say simply that if he doesn't have X he will be harmed" (Feinberg, 1973, p. 111).

not properly spelled out. The fact that person P will lack something vitally important or be harmed if s/he does not get what s/he needs is in itself insufficient information to establish the principle of precedence. There are desires that also stand in such a relation. Even desires that by some would be considered superficial, such as a want for the latest cellphone, might very well, if unheeded, seriously blight a person. Neither is it clear if the harm at issue, in the end, is not reducible to a frustrated desire. That 'family F need some kind of shelter to survive the hard weather circumstances', would by most be seen as normative; to recognise it is to see reasons for trying to do something to meet the need, from a first-person as well as a third-person perspective. If the non-normative fact that a shelter is a necessary condition for their survival is true, then the fact that their survival (naturally) is of vital importance is what provides the normative reasons to act. But these normative reasons, it could be argued, are conditional on some further fact, e.g. that the family has the will to survive. As noted above, it is possible – although somewhat awkward – to ask for the reasons for caring about survival (or whatever is considered to be the absolute end of the chain).[10]

This challenge against an account of needs is reminiscent of an argument made by David Hume. He famously argued: "[a]sk a man *why he uses exercise*; he will answer, *because he desires to keep his health*. If you then enquire, *why he desires health*, he will readily reply, *because sickness is painful*. If you push the enquiries farther, and desire a reason *why he hates pain*, it is impossible he can ever give any. This is an ultimate end, and is never referred to any other object" (Hume, 2004 [1751], p. 90). Hume's position is a matter of debate, but on most interpretations it amounts to something that reduces claims of needs to claims of desire. The need for physical exercise, on this Humean understanding, should be reduced to a desire for the avoidance of pain; but then, strictly speaking, you do not *need* to exercise, you only need to exercise if you want to avoid the physical discomfort associated with inactivity. As long as you lack the right desire – being bored, depressed or just lazy – there is no sense of insisting that you still need exercise (or food, or company, or what have you). This strikes us as counter intuitive (if not for the need of exercise, so at least for the need of nutritious food), and as a conclusion that should be avoided.

This challenges us to explain further the normative engine of 'needs' claims, that is to elaborate the clause 'vitally important'. We must know whether the 'vitally important' is such that it gives needs claims priority over desires.

[10]Think of an example of someone fatally ill, soon facing the inevitable death, and considers whether to take some life-sustaining medicine. In such a case it might be perfectly understandable for the person to ask for the reasons to care about survival.

In other words, we need to find a criterion for why some needs are more important than others (if that indeed is the case). It is not enough to assert, as Thomson does, that "If a person lacks what he needs, the quality of his life must suffer" (Thomson, 1987, p. 36). The suffering, or harmed caused, by an unmet need has to be specified. More likely, "the need must be one that the person not only wants to meet but needs to meet", and furthermore, "cannot help needing" (Frankfurt, 1984, p. 6).

3.2 Two Models of Harm

If basic needs are especially compelling and give reasons of a kind that should make us prioritise them above other claims, the harm caused by an unmet need must be morally significant. Whether this is the case or not, however, depends on how we should understand what it is to suffer harm, how bad it is, and how it should be measured (Cf., Hanser, 2008, pp. 421f). Many existing 'needs-accounts' can be accused of being too vague because this has not been sufficiently specified. James Griffin, for instance, has argued that "[t]he key notions of 'ailment', 'harm', and 'malfunction' are too indeterminate as they stand to do the work expected of them by the need account" (Griffin, 1986, p. 42).[11] To mitigate this, I will now present two different broad ways in which harm can be understood, the 'comparative' and the 'non-comparative' model. I will then argue that it is the latter that must ground claims of needs in order to make sense of their intuitive features, in particular the principle of precedence.

The comparative model is perhaps the standard account of harm.[12] It comes in two versions, a counterfactual and a temporal.[13] The counterfactual version of the comparative model of harm submits that a person is harmed if s/he comes to be worse off than in an alternative state of affairs. In its basic formulation, a person is harmed if and only if there occurs an even e, such that had e not occurred, the person would have been better off. Harm is thus understood counterfactually: we compare the actual state of affairs with a possible state of affairs where e did not happen; if the person is better off as

[11] See also Walzer (1983, p. 65): "Though there are some goods that are needed absolutely, there is no good such that once we see it, we know how it stands vis-à-vis all other goods and how much of it we owe to one another. The nature of a need is not self-evident."

[12] An authoritative, and influential, statement of the model comes from Joel Feinberg, for instance in (1992).

[13] Lukas Meyer provides an alternative terminology for these models. He refers to the counterfactual model as the "subjunctive-historical interpretation of harm", the temporal as the "diachronic interpretation of harm", and the non-comparative model as the "subjunctive-threshold interpretation of harm" (Meyer, 2003).

a result of e, s/he is benefited, and if the person is worse off through e, s/he is harmed. On this account it is natural to understand harms and benefits as mirror images: harm prevention is benefit causing and vice versa.[14] The temporal version replaces the comparison of different states of affairs with one using different times; a person is harmed if s/he comes to be worse off than s/he was before. The formal structure is as follows: a person is harmed at t_2, relative to an earlier time t_1, if and only if s/he is worse off at t_2 than s/he was at t_1 (cf., Hanser, 2008, p. 425).[15]

The name of the non-comparative model is somewhat misleading since it too makes a kind of comparison, although not with a counterfactual alternative in which the event does not occur or with an earlier time t_1; it compares the present state with a certain norm or ideal. The basic idea is that a person is harmed if and only if s/he is in a *non-comparatively* bad state of affairs. 'Harm' is thus understood as the failure to meet a norm or an ideal, rather than as the condition of being worse off compared to an alternative. In other words, the concept of harm is absolute rather than relative: a person is harmed if s/he is 'badly off', rather than 'worse off than'. This model also comes in different versions, depending on how the norm or ideal is understood. One version would be to perceive the norm as one of 'normal functioning', which would lead to an account of harm in terms of impaired functioning. A second version departs from the norm of agency and thus construes harm in terms of impeded capacities for action. A third version takes humanity to be the relevant comparison norm, and thus things that prevents us from leading a normal human life as harms. The most pressing question, of course, is what justifies a certain norm or ideal? I believe that this question can be answered satisfactorily, and will show this in the following section. First, however, we should connect the discussion of harm with the analysis of needs presented above.

Let us return to the analysis of basic needs offered by Thomson, i.e. "A needs X (normative) if and only if A needs X (non-normative) in order to ϕ and ϕ-ing is vitally important" (Thomson, 1987, p. 6). 'Vitally important' is to be understood in terms of harm, according to Thomson. The argument I want to make is that in order to make sense of the intuitive understanding of

[14]This creates a problem for the comparative model. It seems that it cannot account for the harm/benefit asymmetry, i.e., that we tend to think that failing to prevent a harm is morally worse than failing to benefit (Shiffrin, 1999, p. 121; cf., Alm, 2009).

[15]Both the counterfactual and temporal version of the comparative model of harm could be refined to accommodate some initial worries. One may want to add to 'a person is harmed at t_2, relative to an earlier time t_1, if and only if s/he is worse off at t_2 than s/he was at t_1' *in some respect and for some interval of time* (Hanser, 2008, pp. 424f). For the purpose of this text, it suffices to use the basic formulations.

basic needs, which Thomson's analysis and Frankfurt's principle of precedence rely on, it must be the case that a person with an unmet need is badly off, period; that the fact that s/he is worse off compared to an alternative state of affairs (or time) does not save this intuition. This can be shown by applying the different models to some examples of needs claims. First, assume that we are to assess whether P has a basic need for water. Thomson's formula says, P's need for water is basic if and only if the end for which it is needed is 'vitally important'. How do we determine when a harm suffered is 'vitally important' on the two models of harm?

Let us begin with the comparative model of harm: does it provide an informative analysis of the harm of having a basic need unmet? At first sight, it might seem that it can: surely P is worse off (in some sense) having his/her basic need for water unmet (being dehydrated, faint, and eventually dying) compared to a situation where P has water; so, in a sense, if P has water and then loses it, P is harmed.[16] But this does not fully explain the vital importance of an unmet basic need. The comparative model fails to satisfactorily explain the strength and importance of the harms involved in an unmet basic need. The only thing that matters, according to this model, is the gap between the present situation (or time) and an alternative situation (time), but cases of basic need deprivations seem to be characterised by some further detriment: a non-linear gap.

Think of another example now. Say that P just has bought the latest smart phone, but clumsy as s/he is, it is almost immediately lost. In this event, P is worse off than in the counterfactual state of affairs where P held on to his/her phone. In a sense P then is harmed by his/her carelessness. The problem is that if this is true, how is the situation different from the example where P needs water in order to survive? Does P has a basic need in both cases, and if not how are we to explain that it seems vitally important that P gets water but not that P maintains his/her telephone? It is unintuitive to say that P is equally harmed in both cases as one involves a frivolous desire (we can assume that if P's desire for a smart phone were frustrated s/he would feel sad for a while but relatively soon forget that it even happened)

[16]This at least goes for the counterfactual version. The temporal version may have a problem already here: on this we must establish that P is worse off at t_2, relative to t_1, in order for P to be harmed, and for some cases of needing (e.g. permanent states) it may be hard to find a time t_1 where P is better off with respect to a future time t_2. A proponent of the temporal version could, of course, argue that the person's condition is worsened temporally as s/he becomes more dehydrated, weaker, and closer to death. Even so, this seems to be an inferior analysis to the counterfactual, for the reason that the relative changes in well-being over time may be too minute to establish the harm done by an unmet need. As will be argued below, however, there may be a more fundamental challenge that affect both versions of the comparative model.

whereas the other involves an indispensable survival need (without which P cannot subsist). On the non-comparative model, one can argue that there are no reasons of harm-prevention for P – nor for any bystander – to replace the lost phone. Without thereby denying that it would be an improvement in a general sense if it was replaced: *ceteris paribus*, it is better that P gets what s/he wants than not. It is only that the value does not come from harm-prevention.[17] Or, if this seem excessively restrictive, one could argue that P is harmed in the event that the phone is lost but that it is a radically different kind of harm from the one suffered by the loss of water (explained by the breaching of two different kinds of norms or ideals in the two cases).

Since the comparative model makes no difference in kind between harms as the result of losing a phone and losing water, it can be argued that it is not helpful in appreciating the importance of harms in cases of basic needs claims. The harm ascribed by the model is relativised in terms of 'worse than' and 'better than' in a smooth linear way. On this basis, or at least in its standard design, it is natural to construct a linear view where magnitudes of harm track distance only, that is, an ordinal scale. Potentially this leads to failures to detect irregularities (or thresholds) which respectively decrease/increase importance on the scale. According to the comparative model, a moderate decline of well-being may amount to the same kind of harm to a poor person as to an affluent person, as long as it is of the same magnitude. To illustrate, say that to starve is worse than being merely hungry, and to famish worse than to starve, then how much worse is it to famish than to be hungry? This information is not forthcoming in this analysis of harm, which makes it problematic. If it is the case that a move from a state of starvation to one of famishment is much worse than a move from a state of hunger to starvation, this cannot be captured in the basic version of the model. A person with an unmet basic need does not only (or even primarily) suffer harm because s/he is worse off than s/he could have been, but because s/he is in an absolutely bad state of affairs. When it comes to basic needs, we could go as far as to

[17]It should be noted that this argument does not attempt to show that P cannot be harmed in any way in losing the smart phone. If, for instance, P had it and someone stole it, it may be right to say that this act harms P, as s/he is worse off as a result of it. Possibly one should make a distinction between 'harmed states' and 'acts of harming': in determining harmed states, we do not need to regard counterfactual states, though this is needed in determining what counts as an act of harming. Whether someone is in a harmed state is thus determined non-comparatively, whereas to harm a person is defined as the act of causing her to be worse off according to a comparative model of harm.

Alternatively, one could – as Meyer (2003, pp. 152ff), among others, has suggested – present a combined view. According to this view we should think of the comparative and the non-comparative model as respectively providing sufficient conditions for harming while the disjunction of the two views is a necessary condition for harming.

argue that it is irrelevant how relatively bad the situation is – a person is not better off with two drops of water if s/he soon thirsts to death.

These problems of the comparative model of harm applied to the analysis of basic needs do not, of course, undermine its general usefulness. But they indicate that if we want to understand the moral importance of basic needs on standard analyses, it is a non-comparative rather than comparative model of harm that must be vindicated.

3.2.1 Justifying a Baseline

Let us briefly sum up the discussion so far. We began by noticing that there is a sense of needs that has been taken to have a unique moral importance and urgency. That is 'basic needs'; things needed for something vitally important. When a person has a basic need for X, it has been argued, s/he needs X full stop; in other words, a normative necessity is conveyed by basic needs claims. Things needed for a 'vitally important' end are such, the intuition holds, that the subject cannot help but needing them. To understand what this might be, a discussion of harm followed, where it was argued that, to make sense of basic needs claims a non-comparative model is the best candidate. In such a model, a person is harmed when s/he falls below a baseline norm.

There are thus strong reasons to favour the non-comparative model of harm as the basis of claims of needs and as driving the principle of precedence. Still, in order to make this convincing, we need to motivate a norm or baseline whereby harms are determined and thereafter justify it. There are some candidate baselines that come to mind. First, one could understand the harm caused by unmet basic needs in view of a norm of survival (or being), from which needs for water, nutritious food, clean air, sleep, shelter, bodily integrity, etc, could be derived. Second, the list could be extended to track a norm of 'minimal agency', which would include needs for periodic rest, physical and mental health, social exchange, social acceptance, security, etc. These are things, it could be argued, needed for a person to be able to form intentions, as well as to reason and act in light of those. Third, the baseline may be set by what is needed for citizens to function as free and equal in a society, which on a general level could be thought of as things needed to resist oppression and to participate actively in civil life. Fourth, one could take a step further still and with a norm of the good (or flourishing) human life argue that we additionally need a set of capabilities and human goods: the ability to lead a complete life, the ability to imagine and reason, the ability to love, the ability to form a conception of the good, and plan one's own life,

education, sex, play, etc.[18] We will soon return to the question about which norm, if any, is implicit in the attributed moral importance of basic needs. But first we need to say some things about how any norm can be justified.

Irrespective of which norm we believe is relevant, the question is: how can we justify the evaluation of harms in terms of it? The challenge is to explain how it is that we can justifiably appeal to such a norm in our understanding of needs claims; alternatively, how the normativity of basic needs must be understood against the backdrop of a baseline norm rather than as something comparative. If we are unable to demonstrate this, I take it, basic needs claims must be reduced to general claims of desires and the principle of precedence must be rejected. However, such a defence *can* be mounted, and it will now be presented. Consistent with the constructivist approach developed in the previous chapter, the argument will be that such a norm is the outcome of a reflective process of scrutiny carried out from a practical point of view. It is on the basis of such a process, I will argue, that the category of basic needs comes out as morally distinct and prioritised over other values.

A basic supposition on the constructivist approach is that values are essentially related to us as valuing creatures. If unmet needs are of negative value and the provision of them of positive value it is *ultimately* because we, as valuers, have conferred these values to them. The explanation of the moral importance of basic needs is thus, in the final instance, a reflection of the fact that we have bestowed a negative value to certain conditions of needing. That is not to say that the explanation straight-forwardly reduces to this fact. This passage should not be thought of as a concession to the kind of reductionist strategy – e.g., of reducing needs to desires – that was criticised earlier. To value something, to take something to be a reason, or to make a normative judgement are usefully distinguished from mere desiring. Sharon Street's characterisation captures an important difference: "*Valuing* an end, in contrast to merely desiring it, constitutively involves *valuing* what one is fully aware is the necessary means to that end" (2012, p. 44). The relevant attitude we hold towards a perceived lack or need is deeper and richer than what is captured by a mere desire for its provision, at least insofar as we can account for the principle of precedence successfully. To value something, at any rate, is structurally more complex than merely desiring it; among other things it involves experiencing things being "called for" or "demanded" and it likely involves "anxiety or sickness at the thought of not doing them" (Street, 2012, p. 44).

The question about the normativity of basic needs concerns the way in

[18]The listed needs from the norm of the good human life is much influenced by Martha Nussbaum's position (1998).

which my own and others' needs enter into my practical deliberation as reasons for action. More specifically, it concerns if and how I (as an agent) must prioritise their provision in action. Roughly, the argument I want to make is that we can make sense of the principle of precedence on this basis in the following way: being the kind of persons we are, with certain fundamental values embraced, we have laid upon ourselves – or constructed, if you like – a non-comparative baseline such that if a non-basic need comes into conflict with a basic need, the latter has a certain moral edge against the former. To make this argument clearer, I will distinguish three different ways of reasoning about the moral importance of basic needs, corresponding to Kantian, Humean, and political constructivist interpretations respectively. As will be seen all three lead to a similar conclusion, although there are clear differences in the arguments made. Although I believe that political constructivism is the most promising foundation for the main arguments of this dissertation, the purpose of introducing these interpretations will nevertheless not so much be an argument to that effect as a more general demonstration that the principle of precedence can be vindicated.

On Kantian constructivism, the explanation of the moral importance of basic needs begins in the way suggested by Korsgaard in the following quote: "Kant saw that we take things to be important because they are important to us – and he concluded that we must therefore take ourselves to be important" (Korsgaard, 1996, p. 92). On the Kantian approach certain moral commitments are entailed by the very practice of valuing; schematically, if you are to value anything at all, you must value the conditions that make it possible for you to value anything, that is, your human nature. In the words of Korsgaard, "[i]f you don't value your animal nature, you can value nothing. So you must endorse its value" (Korsgaard, 1996, p. 106). The second step is specific to our human identity. Being a reflective agent, a human being, we need reasons to act. In order to act on the basis of reasons we must form a practical identity, a background from which the reasons could be assessed. Thus we think of ourselves as rational agents and seek reasons to act that stand up to critical scrutiny. This practical identity can be understood as "a description under which you value yourself, a description under which you find your life to be worth living and your actions to be worth undertaking" (Korsgaard, 1996, p. 83). To maintain this conception of yourself as an agent, you must value, and give precedence to, not only what is needed for survival, but to all other things constitutive of your agency (which on this Kantian picture controversially also will involve duties owed to others). The most basic explanation of why we have, and most often act upon, reasons to maintain the humanity in ourselves and others is thus simply that as reflective agents we cannot do otherwise. Roughly, then, the precedence of basic needs over

non-basic needs, preferences, and desires is something that we are rationally obliged to accept in virtue of our agency.

The Humean constructivist shares the basic story told with one crucial exception: no substantial moral values follow from the formal characterisation of the capacity to value. It is not possible to vindicate morality from a detached formalised point of view where all specific values are abstracted away, according to the Humean version. Whereas the Kantian constructivist argues that if you are an agent, then you are necessarily bound by the rational requirements of morality, the alternative being an inability to reflectively act at all; the Humean constructivist argues the much weaker point that moral requirements are a function of the particular and contingent starting point you happen to find yourself in as an agent. To inquire about what reasons we have to be an agent, as the Kantian approach sets out to do, that is, the stepping back from and bracketing off of all the reasons we have *as a specific* reflective agent to query about whether we should be such a person to begin with, is confused on this understanding. Given the constructivist method, where normativity is understood from the practical point of view and on the basis of already affirmed normative judgements, such a question cannot be answered. Instead, as no standard for evaluation is provided, the question must be thought of as ill-formulated on the Humean approach (Street, 2012, p. 49). There is thus a sense in which your values are contingent; unlike the Kantian version, the Humean constructivist cannot argue that you are rationally obliged to be a moral agent. However, that is not to say that morality cannot be categorical: "if one is a moral agent, as opposed to just an agent, then part of what that involves is taking oneself to be bound categorically (in certain cases) with respect to what one feels like doing, what one finds pleasant and attractive, and so forth" (Street, 2012, p. 56). It is only the categoricity of the whole set of normative judgements that the Humean constructivist will not affirm. A categorical precedence of basic needs over non-basic needs can be constitutive of being a moral agent, but it is ultimately explained by the fact that we have accepted that being so.

The political constructivist shares the modesty of the Humean version and in a way refines it. The normative basis for needs claims does not lie in anything to which we are rationally compelled to simply by being agents, but depends more specifically on a political context: needs are morally important as their provision is required for the functioning of citizens as free and equal in a society. What makes some needs morally more important than others – and in extension, what justifies the principle of precedence – is that some things are prerequisites for a well-functioning society. This view is in line with Rawls's position (2005 [1993]), but can also be seen as represented by, for instance, Elizabeth Anderson (1999). As her presentation is illuminating

it can briefly be recapitulated here. On basis of a broadly construed ideal of citizenship (including not only political rights, but also access to various activities of civil society), Anderson constructs priorities of capabilities needed for the development and maintenance of such an ideal (Anderson, 1999, p. 317). She writes that some things are needed for us to be able to function as a human being (e.g. water, food, shelter, clothing and medical care, to which she also adds the conditions of human agency, such as "the ability to deliberate about means and ends" and freedom of thought), other things are needed for us to function as equal participants in the economic system (e.g. education and "the right to receive fair value for one's labor"), and finally some things are needed for us to function as citizens (e.g. freedom of speech, freedom of association and "the ability to appear in public without shame") (Anderson, 1999, pp. 317f). The ideal of (full) citizenship, on Anderson's account, thus provides a criterion to rank claims on resources and public attention: claims related to what is needed to maintain the freedom and equality in a society (and that involve what is needed as a human agent and participant of the economy too) take precedence over other claims.

The usefulness of such a grounding of basic needs can be highlighted by considering an example from Thomas Scanlon. He writes:

> The fact that someone would be willing to forgo a decent diet in order to build a monument to his god does not mean that his claim on others for aid in his project has the same strength as a claim for aid in obtaining enough to eat (even assuming that the sacrifices required of others would be the same) (Scanlon, 1975, pp. 659f).

That some claims are morally more urgent than others is not determined by the strength of the preferences expressed by the claimant, but rather given as a function of a shared political ideal. More specifically, we should understand the construction of moral urgency here as being driven by the need for an overlapping consensus given the fact of pluralism: the needs that are prioritised over others are those that everyone reasonably could accept (alternatively, those which no one could reasonably reject) as more important than others in a pluralist society (Scanlon, 1975, p. 668; cf., Anderson, 1999, p. 330; cf., Rawls, 2005 [1993], pp. 133-173). The claim for resources needed to build a temple is different from the one for adequate nutrition in the sense that the latter is such that all reasonable people in a society can accept it whereas the former may reasonably be objected to. In order to have a well-functioning society, certain claims must be generally prioritised over others. A principle giving precedence to basic needs over non-basic needs can be thought of as essential to a functioning society.

I take it that either of the Kantian, Humean or political groundings of the principle of precedence could work (although I should add that I am slightly more sceptical of the first of them). But even if the principle of precedence could thus be vindicated, some may want to take a further step now and map its exact contours. To this we must concede that it would be too grand to be taken here. We cannot say precisely which needs we give precedence to over others, likely it is contextual (on the political interpretation presented above it will, for instance, be dependent on what ideal of citizenship is relevant in a particular society). We could add – if it is at all helpful – that the normative necessity, at any rate, should not be seen as parallel to other kinds of necessities, such as logical, metaphysical, modal or conceptual. Moral obligations or requirements are forceful, but even so it is possible for a person to disregard or fail to act upon what s/he ought to do. In the class of the normatively necessary, there also seems to be room for degrees; (*pro tanto*) reasons can be more or less conclusive. The necessity attributed to basic needs, though, can be said to be at one end of such a spectrum, as they are argued to be essential, serious, indispensable, vital, etc. With those caveats mentioned, we may still want to be somewhat more specific and suggest some needs that convey the relevant necessity, or rather some that do not.

Consider a baseline of human flourishing, or alternatively phrased, human interests or capabilities. Human interests are things valuable to us *qua* human beings, and explain some of our strongest desires. It is no happy coincidence that most people desire health, loving friends and just allocation of societal goods, they could be argued to be guided by our human interests. That our life is constituted by certain such qualities is essentially what it is to be human. Without these prudential values, to quote Martha Nussbaum, "we would not recognize ourselves or others as the sort of beings we are" (Nussbaum, 1998, p. 145). Most perfectionists would embrace basic needs on their chart of the good human life, but they would not stop there. However, as the list gets more extensive, the vital importance of meeting needs gets watered down.

Nussbaum argues that her comprehensive list of human goods should be made top priority, since a life that lacks any of the values "will be regarded as seriously lacking in humanness" (1998, p. 151). What can then be said about an understanding of basic needs claims in these perfectionist terms? If we adopt the end-formula for human interests, and ask what end human interests serve, we may find that they too create 'non-volitional' or 'non-contingent' needs. The values listed above in relation to human flourishing are important to *any* human life, irrespective of individual conceptions of the good. But there might still be something about the needs generated from a baseline of human interests that makes them less weighty than 'survival needs', 'minimal agency needs' and 'citizenship needs'. Not every non-instrumentally valuable

experience can ground the moral necessity of basic needs. Fabian Schuppert, who has made a similar argument, gives an example of the distinction in terms of happiness: according to Thomson's definitions of basic needs (presented in 3.1), we would have a basic need for happiness (Schuppert, 2013, pp. 34f). This seems to be a questionable implication; one could seriously doubt that we are morally required to make people happy: it seems supererogatory. At least there is a difference in degree between the deprivation of what is needed to maintain subsistence and of what is needed for happiness.[19]

The obvious candidate for a criterion that could demarcate morally overriding needs is the baseline of survival. If anything is required to be respected it must be the bare existence of other persons. However, if flourishing is too wide, survival might be too narrow. To interpret basic needs in terms of what is needed in order to survive would exclude many similarly important needs; the eremite perhaps does not need anything but what is needed for survival, but this does not give us the answer to the normative basis of needs in general. We could conclude that the class of morally important needs extends beyond what is needed for survival and yet does not include everything needed to lead a flourishing life. The more precise answer cannot be given at this stage, but is pending a description of the 'moral situation', i.e., the actors involved and their epistemic status. In the following chapter this task is picked up again.

3.3 Features of the Concept of (Basic) Needs

3.3.1 Objective and Subjective Needs

We should now instead turn to the worry, briefly mentioned in the previous chapter, about the "uselessness" of needs as a criterion for sustainable development. Wilfred Beckerman argues:

> [P]eople at different points in time or at different income levels or with different cultural or national backgrounds differ about the importance they attach to different needs. The injunction that we should enable future generations to meet their needs does not provide a clear guidance as to what has to be preserved in order that future generations may do so. [- - -] The term *needs* does not stand for some objective, homogeneous, and indivisible entity. So no guidance is provided by the

[19] One could also doubt whether 'capability theorists' sufficiently appreciate the difference in degrees between different needs. Sabine Alkire has tried, in presenting a reconciliation between Wiggins's account of basic needs and Sen's account of capabilities, but fails to demarcate more from less important needs in a clear way. (see, Alkire, 2005).

> statement that the ability of the present generation to meet its needs must not be sacrificed at all in order to enable future generations to meet their needs. (Beckerman, 2003, pp. 1f)

In short, Beckerman's worry is that needs are subjective, and so relative to space and time. One could though question Beckerman's credibility here – in an *ad hominem* argument – the subjectivity of preferences/wants/desires does not seem to exclude their usefulness in the kind of economic theorising he accepts. Phrased differently, it is not obvious that the informational basis needed to make an evaluation is more restricted for needs than for wants.[20] So maybe it is not variability *per se* that prevents action guidance, but only when it makes estimates of needs distant in space and time difficult or impossible.

Beckerman is surely right in one sense: people do attach different importance to different needs. In fact, as was argued in section 3.1, there are plenty of subjective needs. Whenever someone wants something, s/he creates volitional needs in accordance with that want. What should be said against Beckerman though, is that there are some (basic) needs that are less variable than others, as they are more entrenched in our human nature. Basically, the argument is that whereas we cannot know for sure that future people will desire, say, long distance flying – it could come to be viewed as an unnecessary luxury – we can be rather certain that people will desire mobility in general. Quite contrary to Beckerman's conclusion, needs may turn out to be a more reliable criterion than an alternative (say, GDP growth). Needs are in this sense less subjective, and more objective, than wants and preferences, in the sense that they are points of practical convergence. It is reasonable to believe that people will tend to agree about the importance of the class of basic needs.

There is, however, one caveat that needs to be mentioned. Even if we accept the practical objectivity of needs, and thus have a stable ground; what satisfies these needs will most likely be relative in different ways (Cf., Doyal, 1998). Take the example of the basic need for nutritious food. No doubt this need cuts across cultures and individual differences. We could reasonably conclude that this is something of pivotal importance to persons – irrespective of time and place. But what does this need amount to more concretely? The specification is left open and varies between different contexts. There are local differences in terms of which food is available, there are cultural restrictions and taboos (e.g. kosher food), there are also individual preferences (of taste) that determine what could reasonably satisfy the need for nutritious food, as do life style patterns (e.g. level of physical activity). There is thus a sense in

[20] Amartya Sen has an interesting comparison of different theories of justice in terms of their informational bases in (Sen, 1999, ch. 3).

which needs are relative and influenced by subjective specificities. But this is not to say that the needs are variable, only the satisfiers. Furthermore, even if it opens up for some kind of indeterminacy, it is still of a limited kind; we know, without certainty, that a diet under 1000 calories per day is starvation at any rate.

3.3.2 Possible Constraints

Thus far in the discussion, I have worked under the assumption that the principle of need can act alone – as in the famous dictum from Karl Marx: 'from each according to his ability, to each according to his needs'[21] – but this may be challenged. Gillian Brock draws attention to one such worry: "Needs matter, but holding people responsible for their own decisions matters too. [- - -] What is the best way to distribute responsibility for meeting needs? Some will argue that persons should be responsible for meeting their own needs" (Brock, 2005, p. 67). This is an objection a libertarian, such as Robert Nozick (1974), could charge against a needs-based moral theory. According to standard libertarian accounts it would be unfair for the state to meet the needs of its citizens if that involved, which it surely would, re-distribution of assets. It is argued to be unfair because redistribution would violate individual rights. It is an argument to the effect that some other normative notion is in competition to, or superior to, needs, such as desert. It is often argued that a needs principle must be complemented with considerations of who has the strongest claim on the resources due to having earned or merited them, etc. Such challenges are normative, and concern the moral weight or priority of needs. There are also practical objections that could be made against an unconstrained needs principle, concerning its feasibility.

The needs principle is open to such challenges because it provides only *pro tanto* reasons for someone to reach out a hand. Take the following example: Sara sees the dehydrated Sven and draws the conclusion that he needs a glass of water within the next couple of days in order to survive. Clearly Sara has at least a partial (i.e., *pro tanto*) reason to provide Sven with what he needs to quench his thirst. But does this necessarily mean that this is what she ought to do? No, if she has only limited resources (say, a single glass of water at her disposal) and there are others in need (such as herself), or there are others with different kinds of claims on the resources (e.g. if she must kill a third person and steal his glass of water), it is certainly not obvious. Michael Walzer describes the problem well in the following quote:

[21]The quote is from Marx's *Critique of the Gotha Programme* (1875). See: http://www.marxists–
.org/archive/marx/works/1875/gotha/ch01.htm. (Retrieved 02/05/2011.)

> Since resources are always scarce, hard choices have to be made. I suspect that these can only be political choices. They are subject to a certain philosophical elucidation, but the idea of need and the commitment to communal provision do not by themselves yield any clear determination of priorities or degrees (Walzer, 1983, p. 66)

The problem Walzer draws attention to – that, given resource scarcity, a full distributive theory requires a political pluralism – is however but one of many the simple needs principle faces. In fact, even if there is no scarcity of resources for needs provision, the simple principle would still have a hard time being justified as the only guidance of distribution in a society. It seems that we quite often choose – for ourselves and for others – to satisfy desires over basic needs, and rightly so. There is nothing irrational in, say, fasting, even though it amounts to putting spirituality over the basic necessity of a nutritious diet. Similarly, it seems justified for a municipality to build a boulevard, even if that would slightly increase the risk of fatal road accidents. The desirability and viability of an unconstrained needs principle, such as the Marxian one quoted above, is thus put in doubt. There are set of possible limits to the needs principle – political, societal, cultural, and moral – but it is unclear what kind of restrictions they yield (if any). This problem is related to the comprehensiveness of the theory, of course. We have a choice here of either grounding a full-scale moral theory on needs or a more partial theory, and should opt for the latter. There is no need to rule out other considerations as morally relevant: morality is not only about mitigating harm; goodness, desert and so on are also important.

What we do need to argue, following the principle of precedence, is that the reasons related to basic needs are *prima facie* and in general prior to other concerns. The case for this has already been made above, it only needs to be complemented now. The example of Sven and Sara is exceptional and does not generalise. In normal conditions – what Rawls, called 'the circumstances of justice' – we are not faced with that kind of extreme resource scarcity. It is thus seldom the case that not every basic need can be met simultaneously. In normal circumstances the question of basic needs satisfaction comes prior to questions about personal desert and fairness (Cf., Miller, 1999). Still, it can be the case that some needs create bottomless pits, which drains all resources. In such a case, there may be good practical reasons to not let such needs prevent all other concerns. We will get back to this question in the following chapter.

3.3.3 The Relation to Physical Sustainability

Finally, we should now briefly connect the analysis of needs here with the context of the thesis, namely the discussions of sustainable development and climate change. As was argued in the last chapter, we should understand sustainable development as an abstract solution to a practical problem. Now that we have started to conceptualise, in order to move towards the concrete we should make sure that we are actually approaching a solution. The question is whether or not a needs based theory is conducive to physical sustainability. Andrew Dobson has expressed doubts about this:

> The functional relationship between justice and sustainability is nearly always presented as a virtuous one, but what if it turned out that, under some circumstances, social and economic inequality (another version of what social justice might entail) was conducive to environmental sustainability? For many, this would force a difficult choice between sustainability and justice, and would make clear – for those who chose the former, even on the basis that its realisation would demand the deepening of inequality – the subordination of justice to sustainability. (Dobson, 1998, p. 241)

Is need provision the solution, or part of the problem of sustainable development? Oluf Langhelle correctly criticises Dobson for presenting the relation between justice and physical sustainability as primarily an empirical one (2000, p. 297). The relation is, on the contrary, essentially normative.

It all depends on the conceptions of the key concepts of sustainable development: 'needs' and 'the idea of limits'. On an abstract level, there is nothing that precludes an ecologically damaging needs principle, but as we move towards a conception of what this means more concretely, such a formulation will turn out to be unjustified. The relation between the social and ecological side of sustainable development is manifested in the relation between intra- and intergenerational justice. Physical sustainability can even be defined in terms of the latter: the needs of the present generation may not be met in ways that undermine the ability of future generations to meet their own needs. Physical sustainability, or ecological resilience, is not part of the normative goal of sustainable development; our reasons for caring about the environment and the climate stem from the fact that they are indispensable means to the provision of future needs.

3.4 Conclusion

In this chapter we have dealt with the central concept of needs in sustainable development. The intuitive idea about the moral importance of a certain class of needs is not as straight-forward as it seems. In the philosophical literature on the concept, it is common to draw a distinction between 'basic needs' and 'volitional needs', and to argue that needs of the former kind have a kind of precedence over non-basic needs. To make sense of this principle, a discussion of the underlying notion of harm followed, where it was argued that it must rest on a non-comparative model. With such a model at hand, we were able to give a story about the moral importance of different kinds of needs. Without full precision, it was argued that if some needs are more important than others it must be due to the fact that they stand in a relation to our survival, perseverance of a minimal agency, or citizenship. The full answer needs to contain a more specific account of the moral situation faced, an objective to which we now turn in the following chapter.

Chapter 4

Is Enough Enough? Sufficientarianism and Its Critics

> *There is enough in the world for everybody's need, but not enough for anybody's greed.*
>
> — Mahatma Gandhi quoted by the IPCC-chair, Rajendra Pachauri, when he received the Nobel Peace Prize.

4.1 Introduction

If we construct a theory of justice based on the concept of needs, as previously discussed, the position will most likely be 'sufficientarian'. The principle of precedence naturally transfers to a view of justice as 'providing everyone (future people included) with enough resources to get by'. The 'Brundtland dictum' thus could be understood as follows: 'we ought to meet the needs of the present, but only in ways which give future needs precedence over present non-basic wants.

Sufficientarianism as a theory of justice has its roots in the work of Harry Frankfurt (1987). It was presented in opposition to egalitarian views of justice; Frankfurt argued that "what is important from the point of view of morality is not that everyone should have *the same* but that each should have *enough*" (Frankfurt, 1987, p. 21). Subsequently, similar views have been defended by Anderson (1999); Crisp (2003); Benbaji (2005, 2006); Huseby (2010). Applied to the discussion about what we owe people distant to us in time and space, i.e. international and intergenerational justice, versions have been defended by Beckerman and Pasek (2001); Gosseries (2005); Page (2006); Meyer and Roser (2009); Wolf (2009).

But if the conception of sustainable development is based on sufficientari-

anism, then we have reasons to be somewhat worried. Because once we start to spell out sufficientarianism, its weaknesses become evident. Consider Paula Casal's expression of the view: "the claim that 'what matters is whether individuals have enough'," which can be taken to express two different theses; "[t]he positive thesis stresses the importance of people living above a certain threshold, free from deprivation. The negative thesis denies the relevance of certain additional distributive requirements" (2007, pp. 297-8). In other words, we are obliged to secure enough resources for people to survive, or get by, and nothing else. Enough is enough, in other words. Apart from being too unspecific (how much is enough; who owes these obligations to whom?), which is a surmountable problem, the major concern with such a theory of justice (paradoxically) is that it seems that *enough is not enough*. People tend to think that the requirements of justice extend far beyond providing a sufficient minimum; injustices are perceived in treatment of people at all levels of well-being. Naturally, this depends on where the level of sufficiency is set, just as the assessment of the moral importance of needs depends upon the choice of a baseline. If undetermined, it may lead to an ambiguity in sufficientarian views, where 'sufficiency' is defined variously in terms of basic needs and as the state of being content (Cf., Frankfurt, 1987; Huseby, 2010). Another problem, it seems, is that we would buy this sufficiency at an unacceptably high price, at the expense of all other concerns. If all but one person were far above the threshold and the only way of lifting this person above it was to sacrifice everyone else's prosperity, we would be morally required to do so according to sufficientarianism.

One may then think that if there are alternative distributive principles that implicitly already accommodate a basic needs principle, the worries above would suggest that we should rather opt for one of these alternatives in formulating the ideal of a sustainable development. For instance, it could be proposed that a consequentialist principle coupled with the law of diminishing marginal utility, or a prioritarian principle that weights benefits to the worst off group in a society heavier, or a Rawlsian maximin reasoning such as the difference principle, would better provide for basic needs. Casal, for one, makes a similar point when she argues that the concern sufficientarianism addresses is already, and in better way, covered by Rawls's theory. I will argue that we should resist this temptation, partly because of the specificities of the climate context.

Instead I will present and defend a version of sufficientarianism as a means of motivating normative climate change politics. The approach defended is a moderate version (meaning that it does not assume Casal's negative thesis) and its justification is restricted to the specific context we are interested in. Before that view is elaborated, I will, in section 4.2, present the more general

debate about sufficientarianism. There I will give take heed of its critics and concede that sufficientarianism is indeed problematic when evaluated against alternative principles in the normal arena of discussion. Furthermore, I will argue, that not even its purported strong points form a promising basis for motivating climate justice. The alleged strengths of sufficientarianism, that is, that it seems to give the right intuitions in cases of extreme scarcity of resources and in cases of luxurious inequalities, are of little relevance in the normal setting of the debate. In section 4.3., I will argue that these cases are simply irrelevant given the idealised assumptions made in the debate; thus, if sufficientarianism is compared to other stylised ideal theories of (climate) justice, it is not the case that it should be preferred.

The failure of sufficientarianism in the standard debate is however of limited relevance to the discussion we aim to pursue. On the constructivist approach to morality and justice previously presented, where the perspective is a practical and first-person point of view, things look radically different. On this basis we cannot assume away uncertainties with respect to what others will do and about what we know, in contrast to what is commonplace in the fully idealised model-theoretical context of the normal debate. The argument I will make is the following: even if sufficientarianism seems counter-intuitive in the model-theoretical context, it has much going for it in the more concrete decision-making context, which is also the relevant one to climate change politics.

To make this argument, I will present an outline of the main problems of motivating climate change abatement. It will show that the incentive structure makes inaction likely and that the hope for an optimal solution is vain. On that conclusion, I will present three reasons – where the focus will be on the third, as the first two specify arguments already mentioned in the previous chapter – in favour of opting for a sufficientarian needs-principle. First, given the fact of deep uncertainty, a needs-principle is a relatively more reliable criterion for distribution, particularly in its intergenerational application. Second, a sufficientarian needs-principle can be the object of an overlapping consensus in a pluralistic society. Third, in section 4.4., I will advance a novel argument for sufficientarianism built on the idea of rational satisficing. I will argue that we have reasons to satisfice in the sense of being tentatively content with a partial solution to the conflict faced between development and its unreasonable consequences on future people. The "good enough" solution is that we should at least not compromise the ability of others to meet their basic needs.

In the final section my proposed sufficientarianism is related back to the critique mentioned in the beginning. In particular I will argue that Casal's argument does not really prove sufficientarianism wrong so much as show

that it is a useful complement to other theories of justice, such as Rawls's 'justice as fairness'. I will furthermore argue that Rawls in fact also amended a sufficientarian constraint to his general theory for reasons similar to the ones appealed to as motivating my own sufficientarianism: in the non-ideal situation of intergenerational justice, a sufficientarian principle is tentatively justified.

4.2 Sufficientarianism Explained and Criticised

The normal arena for the discussion and criticism of sufficientarianism is "ethics of distribution" (Parfit, 1995), which has been dominated by different versions of utilitarianism and prioritarianism. It is a kind of ethics that aims...

> "to consider different possible states of affairs, or outcomes, each involving the same set of people. We imagine that we know how well off, in these outcomes, these people would be. We then ask whether either outcome would be better, or would be the outcome that we ought to bring about" (Parfit, 1995, p. 82).

Although one thus does not have to be a standard utilitarian to enter this debate, the views that emerge could nonetheless all be framed as broadly consequentialist in that they consider utilities for different policies.[1]

Frankfurt was not very specific in spelling out the positive thesis of sufficientarianism, as his main aim was to draw attention to some problems of existing (egalitarian) views of justice. The views he considered were either directly or indirectly related to equality as a moral ideal, in contrast to his contention that equality is of no moral importance at all. The most visible opponent then becomes egalitarian ideals of justice, according to which equality is the only intrinsic moral value. But he also contends that one cannot

[1] This could be contrasted with views of justice that reject such outcome-based principles altogether and argue for historical principles instead. Robert Nozick's view is perhaps the most salient among them. He argued that "whether a distribution is just depends upon how it came about." (Nozick, 1974, p. 153). That is, if a given distribution of resources has arisen through acceptable (as in not violating any prior entitlements) exchanges, then it is fair, according to Nozick. Whether initial entitlements are relevant to the extent of making the endeavours unjust cannot be settled here. We can only note, for the purpose of unfolding the standard arena of the debate, that sufficientarianism is usually understood on the assumption Parfit proposes (Parfit, 1995, p. 82), namely that there at least are some cases where there are no historical entitlements to consider. This assumption is to a certain extent reasonable in the context of the discussion, as many of the resources discussed (e.g., fresh air) could be considered to be 'common goods'. In a later chapter, however, when the issue of responsibility is dealt with, we will reconsider and challenge this assumption.

establish the moral importance of equality indirectly with an argument about the instrumental value of equality, such as utilitarian arguments appealing to diminishing marginal utility. According to such arguments, equality is systematically, if only instrumentally, valuable, as the average utility is maximised through promoting equality. Benefiting the poor is more efficient than benefiting the rich, as resources are likely to generate higher utility if spent on someone worse rather than better off. Furthermore, Frankfurt argues against Rawlsian inspired views, what could be called 'maximin', which states that lexical priority ought to be given to the worst off.[2] After Frankfurt's initial proposal, a more modest version of the Rawlsian view has emerged on the scene, called 'prioritarianism', which states that "benefiting people matters more the worse off those people are" (Parfit, 1995, p. 101). That is, the utilities are weighted, over and above what is already done by accounting for diminishing marginal utility, in favour of the worst off people in a situation. The difference between the maximin and priority view concerns the strength of the priority, the former attributes lexical priority whereas the latter (what we can call) 'heavily weighted priority'.[3] The difference between these two versions is important, as we will see below, although somewhat hard to formalise. Out of simplicity, let us thus confine the contrast to egalitarianism, utilitarianism and prioritarianism first.

To illustrate the difference between these views we could construct a tentative schema describing the competing alternatives. We compare four different outcome distributions of utilities (1, 2, 3, 4), where half of the population gets one value and the other half another value. The different positions Egalitarianism (E), Utilitarianism (U), Prioritarianism (P), and Sufficientarianism (S) would recommend different outcomes. The distribution would be justified in case it: (1) increased equality, E (2) maximised utility, U (3) benefited the worst off, P (4) promoted sufficiency, S. Consider therefore:

Without the values specified for option 4, the following information is communicated. For E, the best state of affairs is the one where everyone is equally well off (or one in which we approach such an ideal). That is distribution 1. Alternative 1 is superior to 2 and 3, no matter how much

[2]The expression 'lexical' priority is from Rawls. It is short for lexicographical, as in how the words are ordered in a dictionary (A, B, C, etc.). To assign lexical priority is to set an absolute priority in the sense that when something lexically prior is assessed it cannot be reduced or dismissed by something lexically after.

[3]One could argue that there are two corresponding versions of sufficientarianism; a 'weak' version that qualifies the priority view (what matters is that people have enough) and a 'strong' version that qualifies the maximin view by ruling out concerns above the sufficiency threshold (where everyone has enough, inequalities are of no moral importance) (see Meyer and Roser, 2009).

	Half	Other half
1	50	50
2	100	50
3	59	51
4	(At least) X	(At least) X

Table 4.1: Comparison of E, U, P, S

better (in absolute numbers) people would fare in them. A traditional utilitarian would rank the alternatives in relation to their utility sum, that is, 1 is the worst, 3 next best, and 2 best. A prioritarian could argue that any difference in utility must be justified in being an improvement for the worst off, and might thus consider 3 as superior to either 1 or 2. What would the sufficientarian answer be? Well, as in Frankfurt's quote above, what matters is only that people have enough. Changes are justified if they secure sufficiency, or, in other words, get as many people as possible across a threshold level of utility, or "maximize the incidence of sufficiency" (Frankfurt, 1987, p. 31).[4] Say that the threshold level for 'enough' is 60, then S's recommendation might be the same as U's, namely 2, since that is the only one where the sufficiency level is reached (for some). However, it need not converge with U. Consider another set of distributions:

	Half	Other half
1	30	30
2	59	41
3	45	42
4	60	39

Table 4.2: Comparison of E, U, P, S

[4]Now there are many other versions of sufficientarianism, and many of them would not agree to this. Instead it could be argued that what matters is to minimise the incidence of insufficiency (Cf., Huseby, 2010); or that the moral importance is a function such that considerations are more important the further below the threshold they are (Cf., Crisp, 2003), and perhaps add that even things above the threshold is of some (although much less) importance (Cf., Brown, 2005); or a different function where importance is discriminated in several thresholds, but with an absolute cut-off point (Cf., Benbaji, 2005, 2006). It would take us too far astray to address each of these different specifications. On a general level, we only need to know that that they are all challenged with a kind of dilemma presented by Casal (2007), described below.

With these alternatives, and given the same sufficiency level, S would diverge from all the other positions and recommend 4. That is, even though 4 does not maximise either utility (as in 2) or equality (as in 1), or works to the benefit of the worst off (as in 3), it maximises the incidence of sufficiency.

This seems to give the right result in situations of resource scarcity, where not everyone could get enough. For instance, in medical cases of 'triage':

> **The Emergency Room**: Two seriously injured patients enter the emergency room of a hospital. Without treatment none of the patients will survive. The only doctor there will have time to treat only one of them and is thus forced to triage. Patient A suffers from serious brain-damage with slim chance of survival, while patient B suffers from an internal bleeding that slowly is killing her, but which could relatively easily be reversed with the right treatment in time.

In such a case it seems justified for the doctor to merely care about maximising the incidence of sufficiency. To split his/her time between the patients, in an egalitarian fashion, would in fact lead to the "morally unacceptable" (Frankfurt, 1987, p. 31) conclusion that both die. Similarly, if the doctor, as presumed, saves patient B, s/he does so despite the fact that it does not work to the benefit of the worse off patient A. The example will of course be contentious in its interpretation – the prioritarian position here differs from the maximin, as it recognises that there are limits to benefiting the worst off, which justify the choice of the doctor. Frankfurt could respond to such a concession that it underlines his point. He argues: "[i]t goes without saying, after all, that preventing or correcting such deviations [from the egalitarian ideal] may involve costs which – whether measured in economic terms or in terms of noneconomic considerations – are by any reasonable measure unacceptable" (Frankfurt, 1987, p. 21). It is unacceptable to promote equality at the cost of sacrificing patient B.

Similar implications could be generated from quite another situation, concerning inequalities between wealthy persons far above the sufficiency level, such as the difference between Bill Gates and Warren Buffet (Benbaji, 2005):

> **Luxurious Inequality**: Both Bill Gates and Warren Buffet are extremely well off, but still Gates is better off than Buffet. Does this fact give us a reason to benefit Buffet over Gates?

Yitzhak Benbaji argues that "at least in some cases in which both x and y are well off, the mere fact that x is worse off than y does not constitute a reason for benefiting x" (2005, p. 315). This exemplifies Frankfurt's claim

that "if everyone had enough, it would be of no moral consequence whether one had more than others" (Frankfurt, 1987, p. 21). In this example, the edge is rather against the prioritarian, which seems committed to seeing some (*prima facie*) reasons for benefiting Buffet over Gates, derivatively egalitarian as it is (Cf., Benbaji, 2005; Meyer and Roser, 2009). One could take these examples to indicate that what matters morally is that everyone has enough (in cases like these).

Still, in its bare bones, sufficientarianism, thus construed, seems grossly inadequate. If all that matters is to get people across a threshold of sufficiency, it implies very unintuitive conclusions. Consider the following variation of a problem known as 'the levelling down objection':

	Half	Other half
1	120	59
2	60	60

Table 4.3: Levelling down S

Suppose that half of the population live at just below what could be considered a decent life and the other half live prosperous lives. The only way in which we could increase sufficiency, is by levelling down the rich half to the level of sufficiency. Paula Casal raises some adjacent problems: "the thesis favours a world overpopulated with individuals just above sufficiency, and perhaps containing many far below that line, over a less crowded world where everybody is very well off." To which she adds: "[m]oreover, the statement requires raising a million and one from just below to just above the threshold rather than one million from intense deprivation to paradisiacal conditions" (Casal, 2007, p. 298). The problems Casal highlights are specifically addressed to Frankfurt's principle of maximising the incidence of sufficiency (and nothing else), but can be taken to indicate a more general concern for sufficientarianism in its restrictive view on justice: the idea of a morally important threshold and the unimportance of all else seems inadequate to account for the spectrum of moral concerns that can be envisioned.

There are ways out of this, but the problem is that they all seem to undermine the very essence of the theory. One could, for instance, "affirm a more moderate version of the positive thesis, by attaching much greater, although nonlexical, importance to benefiting those with less than enough or by endorsing prioritarian reasoning above as well as below the threshold" (Casal, 2007, p. 299). This would reduce, or eliminate, the worries above, but only at the price of accepting a quite different position, i.e. prioritarianism. Alternatively, one could modify the position to make it more all-encompassing

by increasing the height of the floor of sufficiency (cf., Huseby, 2010). If by 'sufficient resources' it is meant what is needed for persons to be satisfied, then it might not be as hard to accept the problems above. But then, the problem is rather that the theory needs to be complemented with an additional principle below the threshold; without such an addition, the view looks much like traditional utilitarianism. In other words, it seems that sufficientarianism runs a great risk of being reduced to another position once we start to spell out the positive side of it. The basic feature of sufficientarianism – following the reasoning from the principle of precedence – is that there is a class of moral demands that ought to be given absolute priority over other concerns. The problem is that in normal circumstances it seems unreasonable to assign such lexical priority. An hypothesised explanation is that we are generally willing to sacrifice something slightly more important, if we stand a chance of winning a much larger sum of something slightly less important. Accepting trade-offs even for the class of important needs generally works to the benefit of even those who are worst off.

4.3 Sufficientarian Climate Justice

Even if one can be sceptical about the prospects of a full-fledged defence of sufficientarianism based on the critique above, one might think that there are at least two typical situations which make the view seem appealing and cling on to them, that is, in cases of triage and luxurious inequalities. One way to account for the intuition that sufficientarianism is a reasonable principle of climate justice would thus be to argue that the situation regarding climate politics is relevantly analogous to either of these cases.

Firstly, one could argue that if we look at climate change over longer time horizons (+100 years), the situation might be such that triage is relevant. Catriona McKinnon has considered such arguments (2011, ch. 5).[5] A similar argument would be to propose a virtue of frugality in order to conserve finite resources into an indefinite future. The reasoning may be something like the following: we should only use as many resources as are needed to meet everyone's basic needs presently, the rest must be saved for the future to allow every subsequent generation to do the same. The first problem for such a proposal is that even if it seems unlikely that we have enough resources to maintain present life styles for infinity, it is not clear that that should be the aim either. It is not obvious that the situation we are in is one of extreme

[5]Another possibility mentioned by McKinnon is that triage is already relevant if we think about emission rights as a scarce goods under a global carbon budget (McKinnon, 2011, p. 113).

scarcity, or 'hopeless insufficiency' (Page, 2007), such that it is impossible to provide for everyone's needs due to an insufficiently large distributive cake. It depends on who counts as 'everyone', or how distant are the time horizons we consider; in other words, on the scope of our ethical principles. If we want our principles to be understandable and workable, there are good reasons to use a somewhat more restrictive scope. In this case, we are certainly not in a situation of hopeless insufficiency, though there might be reasons to be wary about moving in that direction. A second "problem" is that even if we were to grant longer time horizons, and thus possibly make the situation into one of hopeless insufficiency, it is not obvious that a principled distribution would be one of justice. It is common to argue that claims of justice only apply in the "circumstances of justice" (Hume, 1978 [1739]; cf., Rawls, 1971), normally thought to be composed of moderate scarcity of resources among other things. How to characterise the situation we presently face is a task we will return to in the subsequent chapter; the point I want to make now is only that, the ground for arguing that sufficientarianism can handle cases of triage is not relevant to the debate in which it is normally set, due to some – perhaps questionable – idealisations.

Secondly, one could argue that the case of luxurious inequalities has a relevant parallel in the following idea: in our efforts to maximise utility, promote equality, or in order to raise the position of those presently worst off we use resources to such an extent that we risk future sustainability. A version of this argument is presented by Thomas Schramme (2006). On this conjecture, the reason for opting for a sufficientarian distribution of resources would be that it would not waste resources, or promote a luxurious moral ideal, at the expense of what truly is important, namely securing sufficiency. This line of argument is intuitively appealing in the sense that global environmental problems such as climate change seem to be driven by extravagant resource consumption, and in specifying a cut-off point for moral concern it is natural to believe that sufficientarianism is thereby less wasteful. However tempting this basis for a sufficientarian approach is, I think it should be resisted. The first reason for why this argument is unlikely to be persuasive is that it builds on straw-man versions of the alternative principles of distribution. Reasonable utilitarian, egalitarian, and prioritarian views would amend an intergenerational principle to the intragenerational one, making it far from clear that, for instance, utility would be maximised if resources were wastefully consumed here and now. The second reason as to why this argument should not be appealed to is that we cannot by assumption make perceptions of injustices above a sufficiency level unreasonable and wasteful in a non-question begging way. Finally, if the only way in which we could motivate a sufficientarian ideal was by way of simple moralism, by

appealing to asceticism or frugality, then it would highly unlikely be found an acceptable principle for all to live by. I think instead that we should conclude that on the premises of the normal arena for discussing sufficientarianism it does not provide a satisfactory basis for climate justice. Neither would sustainable development, understood along these lines, be a particularly appealing position.

In what follows, I want to argue that there are other arguments available for sufficientarianism. Unlike the discussion hitherto, the following arguments will be based on the constructivist approach I have previously argued for. In essence, the reason for the failure of sufficientarianism discussed above comes from assuming away relevant features of the moral situation faced. On Parfit's assumptions, where we know all the outcomes including the people affected and their exact levels of wellbeing, the sufficientarian principle will be made redundant. However these assumptions must be considered damagingly idealised in the present discussion, as will soon be explained. Once the situation is given a more realistic description, I will argue that sufficientarianism should be our first candidate principle.

4.3.1 A Non-Ideal Situation

Climate politics is composed of a range of uncertainties, which were carefully reviewed in chapter one. We can be reminded that these uncertainties range from rather few concerning the basic science, more when it come climate models and scenarios, and a great many considering the impacts and strategies of mitigation discussed. It is fair to say that we do not know how much harm present day emissions of greenhouse gases will cause, particularly not on a local level (although we can be certain that they will cause harm if left unmitigated). This makes it hard, if not impossible, to know what bequest we will and/or should leave for future generations, which in turn translates to an uncertainty about appropriate saving rates. Maybe current economic growth amounts to sufficient compensation for any costs that will result from future climate change, but it seems unlikely. Maybe all other savings for the future are eaten up by margin by the costs of climate change. The intergenerational situation is uncertain in this respect. What we do know, however, is that inaction is likely to be costly: it is much cheaper to pay to prevent or mitigate climate change *ex ante* than it is to adapt to it *ex post* (Stern, 2010b). However, as Aaron Maltais notes, "although the most important cost benefit analyses are positive for climate change mitigation, as soon as we make moves away from common model assumptions of perfect policy implementation and full global cooperation the costs of mitigation can increase quite dramatically" (Maltais, forthcoming, p. 13). Despite the

long-term benefits of climate change abatement, the incentive structure is such that inaction will be generally preferred to action. In practice, most relevant actors will find it rewarding to continue with their emissions; business-as-usual prevails.

This can be explained with a metaphor presented by Stephen Gardiner (2011b): climate change as a "perfect moral storm". A perfect storm is the convergence of separately worrying problems into one even greater whole; in the climate case, Gardiner argues that problems of intergenerational justice, international justice together with the theoretical inadequacy of existing economic, social and moral theories compose this problematic unity.

To begin with, the problem of climate change can be thought of as an aggravated version of what Garrett Hardin (1968) calls a "Tragedy of the Commons". The tragedy of the commons can be understood as a variation of the Prisoner's Dilemma adapted to questions about managing common-pool resources. It can be explained as the outcome of self-interested individual agents acting against their long-term interest of maintaining a collective resource. The application to the problem of climate change often assumes nation states as the relevant agents and the ability of the atmosphere to absorb a certain amount of greenhouse gases as a global commons. The problem, then, is that even if it is collectively best not to over-exploit this absorptive capacity of the atmosphere, it is in the short-term interest of each and every agent to do so, and thus the tragedy results. More specifically, irrespectively of what the other agents do (emit or not emit), a nation state does best by continuing with its emissions; in the case where others continue to emit, it risks becoming a sucker by single-handedly abstaining from further emissions, and in case everyone else does decide not to emit more, it can beneficially free-ride on this decision by creating further emissions. Even though this seems troubling enough, it is an underestimation of the severity of the problem of climate change. First, in a traditional tragedy of the commons, the solution – the maintenance of the commons – really lies in each and everyone's long-term interest; in the case of climate change this is not obviously so. This has to do with the fact that in typical tragedy of the commons it is those who collectively cause the problem who also suffer from it, while in the case of climate change those who cause the problem are temporally (and sometimes geographically) distanced from those who are negatively implicated (Andreou, 2006; Gardiner, 2010 [2006]). The cause of this cost distribution issue is that the negative impacts of climate change are widely dispersed over space and time. The benefits of climate change abatement will be experienced by people far off in the future, whereas its costs are born here and now; or, conversely, the benefits of further emissions accrues to the present generation and the costs of future generations. To

this we should add "skewed vulnerabilities" (Gardiner, 2010 [2006]): those who stand to benefit from further emissions are generally from the developed world, whereas the victims are generally future people of the developing world, already exposed to exploitation due to their distant situation.

A further complicating factor is that the sources of greenhouse gases are related to things deeply entrenched in modern societies. The burning of fossil fuel energy – oil, coal and gas – deforestation and meat production are pillars of contemporary societies in the present world. In particular, economic growth has historically been based on the access to cheap fossil fuel energy. The question concerns some of our much cherished values (at least in the Northern hemisphere). Climate change abatement can at least be perceived as being tantamount to a restructuring of modern societies and economies on a fundamental level, and in extension as a threat against embraced aspirations, hopes and preferences. At the same time, the benefits of action may appear abstract, far off and uncertain (Gardiner, 2010 [2006], p. 90; Maltais, forthcoming, p. 8).

We thus arrive at the following problematic conclusion:

> [S]ince the benefits of carbon dioxide emission are felt primarily by the present generation, in the form of cheap energy, whereas the costs, in the form of the risk of severe and perhaps catastrophic climate change, are substantially deferred to future generations, climate change might provide an instance of a severe intergenerational collective-action problem. Moreover, this problem will be iterated. Each new generation will face the same incentive structure as soon as it gains the power to decide whether or not to act. (Gardiner, 2010 [2006], p. 92)

The problem is an especially intractable version of the tragedy of the commons. It is worse in the sense that if we think of generations as the relevant agents and climate change abatement as a collective good, then it (seemingly) is not only individually rational to prefer continued emissions, but it is *collectively rational* too. Since the first generation faces an incentive structure such that inaction is beneficial, the problem may be iterated for every subsequent generation.

It should be noted that the problem can materialise even in more ideal conditions, as Chrisoula Andreou has shown. She argues that in certain cases "where there are individually negligible effects, destructive conduct can flourish even among *unified* collectives whose members have a shared set of preferences, are aware of and will incur the costs of their conduct, and do not discount (in any noteworthy way) future (dis)utility" (Andreou, 2006, p. 99). This happens when preferences are stable (i.e. no re-individuation or re-configuration of preferences over time are assumed) but intransitive, as

can be shown with a version of Warren Quinn's puzzle of the self-torturer (Quinn, 1993, ch. 10). The self-torturer has a device attached to him that can send out incrementally small currents (there are 1001 settings) to his body, for each increment he is given a monetary reward and cannot feel any noticeable difference compared to the previous setting. However, there are clear differences in comfort between sufficiently separated settings. The puzzle now is that the self-torturer will rationally prefer to always add one increment, as this gives him a reward and no noticeable discomfort, however at the same time he prefers the initial state (S) of no pain to the one (S+1000) of excruciating pain in which he eventually will end up. A practical parallel is the reluctant smoker: s/he might be well aware of the health effects of continued smoking and so prefer to quit in time to preserve a decent health, but at the same time s/he may prefer to take one last cigarette before s/he gives it up as this will not make a noticeable impact on her/his health. S/he may thus rationally prefer to take one more cigarette no matter what state s/he find herself in (e.g. quitting after 5001 cigarettes is preferred to quitting after 5000 cigarettes, and quitting after 5002 cigarettes preferred to quitting after 5001 cigarettes, etc.), and so be lead towards a state of bad health which s/he clearly would want to avoid (Andreou, 2006, 2007). Andreou argues that a similar logic is relevant to environmental problems, such as the accumulation of greenhouse gases in the atmosphere. Even if there was a collectively shared goal of climate politics, say, avoiding a global temperature increase over 2°C, which meant that the greenhouse gas concentration in the atmosphere must stay between 350–450 PPM to allow for a reasonable chance of achieving this, each agent could still prefer one more month of excessive consumption (or, what ever it is that drives the emissions). As the individual contributions are negligible they will not make a difference to the overall problem, and so rational agents are lead towards an end they clearly want to avoid. To break out of this impasse, Andreou argues, "[t]he task is to settle, somewhat arbitrarily, on an option that is within the range of acceptable" (Andreou, 2006, p. 107). In these situations there are no optimal solutions: "[d]ue to intransitivity, whatever course of action the (individual or collective) agent opts for, it will serve the agent's concerns worse than another available course of action" (Andreou, 2006, p. 106).

We should further add to this problem of procrastination that in the case of climate change a delayed solution may be self-reinforcing, so as to make the desired result even less likely. In failing to act, the present generation is not passing on a static environmental problem to the next generation, but is also gradually making the problem worse. This is in part because emissions will continue to accumulate in the atmosphere and in part because mitigation options likely will be more costly the longer action is put off. As Maltais

writes: "Thus it is not just that immediate action is required to get onto a reasonably safe emissions trajectory. Without immediate action there is every reason to expect that the preference for short-term interests can actually get much stronger" (Maltais, forthcoming, p. 13). All of this can, at least partly, explain the gridlock that persists in the political discussion around climate change[6], and also highlight that the prospects for a solution are worse here compared to the case of the ozone problem where successful action came about (Maltais, forthcoming, pp. 7f).

Let me sum up the relevant features of the climate context. First, we do not know exactly how much harm our continued emissions may cause, except that they will cause serious harm if left unmitigated. Second, on certain reasonable – though neither likely, nor unlikely – scenarios the temperature increase may be catastrophic, i.e. lead to unacceptable outcomes. Third, the solutions or means of doing something about the problem are thought to be costly. Fourth, the existing incentive structure suggests that inaction is the dominant strategy and thus noncompliance is to be expected on most proposed principled action plans. Fifth, there is reason to believe that there is no optimal outcome even under more ideal conditions. This underlying problem area may be described as 'moral choice under uncertainty', i.e. what ought we do when we are uncertain both about the outcomes and the motives and aims of the actors involved. The argument I now want to make is that a kind of moderate sufficientarianism is reasonable under these conditions.

4.3.2 Practical Reasoning in a Non-Ideal Situation

My proposal is best explained against the backdrop of the general discussion about practical reasoning.[7] Practical reasoning is different from theoretical reasoning in some ways, most clearly it issues in actions that aim to change the

[6]Well exemplified by the struggling international climate negotiations. It took many years of negotiations just to settle on the structure of a climate treaty, the Kyoto protocol in 1997, and even longer for it to enter into force, in 2005. Even though there are some compliance mechanisms in the protocol, they are considered weak (Grubb, 2003), and their effectiveness is seriously doubted.

[7]One may wonder about the relation between practical reasoning and moral reasoning. The answer is that the latter is a subcategory of the former; all moral reasoning is practical reasoning, but not the other way around. What marks practical moral reasoning is that it is the kind of practical reasoning that is influenced by moral considerations. There are other ways of conceptualising this too. One could, for instance, adopt a Kantian model where moral reasoning essentially is the same as practical reasoning: if an agent reasons correctly about practical matters she will be lead towards substantial moral conclusions. For the present purposes there is no need to take a stand for any more radical position, like the Kantian model. See also Richardson (2013).

world rather than in descriptions or predictions of the world. The overarching question is thus 'what ought one to do?'. The standard model in this field is, what could be called, 'maximising rationality', which can be specified as follows: we ought to act in such a way that subjective expected utility is maximised. The model has been much discussed and developed in great detail by studies in decision theory, theory of rational choice and modern economics. A main motivation behind it is its theoretical conservatism and economy; it is claimed that it does not make any controversial assumptions from a naturalistic/scientific point of view. It should be noted that most participants in the discussion about practical reasoning want to avoid substantial critique of individual ends and focus only on structural requirements on reasoning itself. Arguably the maximising rationality-model can achieve this by presenting normative requirements as merely internal critique of individual desires as parts of a whole motivational set (Wallace, 2009).

The argument I now want to make begins by arguing that maximising rationality is not a suitable model for practical reasoning in the climate context described above. The simple explanation is that this model needs information as input that is beyond reach in the present situation. In the context of climate change politics, such a model will turn out to be unpromising, or even a non-starter, because of the uncertainties, indeterminacy and intransitive preferences discussed above. The issue is most directly related to maximising consequentialist approaches, but similar problems also affect the other alternatives discussed above, that is egalitarian and prioritarian principles. The problem is the same: in the situation we face with regards to climate change, this model demands input we do not have: about how much harm further emissions will cause on future people, the relevant levels of wellbeing and number of people in the different scenarios imagined. Further, as was argued for in chapter one, it is also not the case that we can rely on expectations in determining recommended distributions.

The next step is to argue that the constructivist method can more readily accommodate a workable model for practical reasoning in this context. As was explained in chapter two, the constructivist approach adopts a practical outlook and sees normative judgements as solutions to practical questions; the philosophical task is "to articulate and to make explicit those shared notions and principles thought to be already latent in common sense [...]" (Rawls, 1980, p. 518). For this objective no input is needed about specified likelihoods of various courses of action and the impact on individual wellbeing in them respectively. Instead, we must think clearly about "those shared notions and principles" that are relevant to the issue of climate change; we need to think about what is important for people presently and with regards to the future, and we must accurately describe the situation around climate change. These

are things that we have done already, in the present and previous chapters, at least in the sense of rough conceptions.

The case for sufficientarianism can now be made in three additional steps. First, I will propose a more suitable model of practical reasoning for the context, namely satisficing. Secondly, I will argue that if it is reasonable to satisfice in the climate context, then a sufficientarian ideal is a plausible suggestion for a satisficing (or "good enough") solution. I will strengthen this claim through two corollary arguments, already touched upon in the previous chapter. The sufficientarian needs principle is a relatively reliable criterion in an otherwise deeply uncertain situation and it can be the object of an overlapping consensus in a pluralistic society. These two points further reinforce the case that climate change action on basis of a needs principle is rationally called for in the present situation.[8]

4.3.3 Rational Satisficing

The term 'satisficing' was proposed by the economist Herbert Simon (1955; 1956). Simon's basic idea was that typical choice situations are such that human cognitive and calculative abilities are insufficiently sophisticated to apply principles such as maximisation; to bring about the best possible outcome seems out of reach for a human being, so we need to simplify. Simon's model then suggests such simplifications. First, instead of assigning utilities to all possible outcomes, they are assigned one of the two values "satisfactory" and "unsatisfactory". Secondly, the principle for ordering outcomes is simplified: "According to that rule, rationality requires an agent first to identify the set of all satisfactory outcomes of the choice situation, and then to choose an alternative all of whose outcomes are in the set of satisfactory outcomes", as Michael Byron explains it (2004, p. 2). Unlike the application of maximising, satisficing is not dependent on calculating probabilities of outcomes. The rationality of an action is determined solely by whether the outcomes it issues are satisfactory or not. A related application of satisficing is as a "stopping rule". In cases in which not all outcomes are known beforehand, where possible outcomes must be scanned before a choice can be made, satisficing

[8] A methodological note is in place: the following arguments for the needs principle are not directly moral arguments, but as they are influenced by moral considerations they may still be described as instances of practical moral reasoning. In the previous chapter, a case was made for the moral importance of needs prioritisation, in the arguments for the principle of precedence. The present development of that follows neatly on the constructivist method: we must now think about and characterise the practical choice situation in order to test whether acting on a sufficientarian needs principle leads to acceptable outcomes (which of course is not obvious, although it is abstractly justified).

might be used to determine an end-point to such a search. Satisficing would in this case be to choose the first satisfactory – or 'good enough' – outcome that shows up.

The benefits of satisficing in comparison with maximising, according to Simon, are that it is both normatively and descriptively more accurate. It is a better explanation of what practical rationality looks like: we seldom make the kind of expected utility calculations proposed by maximising accounts, and it would not be a good idea trying either. Satisficing presents a more workable conception of rationality. The reason why maximising is an unsuitable decision making procedure thus is that we lack the kind of information that would be needed the get it off the ground. This, of course, is particularly damaging in the present case: as we saw in the previous section (and also in the introductory chapter) the situation is one of deep uncertainty, high stakes and potentially severe outcomes. We are well-advised not to try to maximise expected utility when thinking about what to do about climate change.

Now defenders of the standard view may contend that the model just criticised is merely a crude version of the one they have in mind (cf., Dreier, 2004). Their account should not be understood as unbounded maximising, but rather as maximising under a set of constraints (e.g. time, money, cognitive resources). In other words, it is not maximising but optimising that should be compared to satisficing. What then is the difference between optimising and satisficing? In some respects they seem to fall together. Byron has, for instance, argued that once we try to specify what is meant by 'good enough', we will be forced into a position of optimising. He writes:

> In virtue of what is an alternative 'good enough'? The satisficer as such chooses an alternative because it is, in some way, good enough, whether or not it is the best. Assume that doing so is rational, in some sense. But something about the alternative must rationalize or justify the choice: It is presumably some feature of the alternative that makes it good enough. However the chooser answers this question, the feature(s) mentioned can be built into a conception of good, utility, whatever according to which the choice is optimizing (Byron, 2004, p. 10).

To highlight this, we can consider a much discussed example in the literature on satisficing:

> Suppose Hannah has put her house on the market, and naturally she wants the best price for it. Because she cannot wait indefinitely for bids to come in, she decides to accept the first bid that comes in above a certain satisfactory price she chooses in advance. Suppose she picks

> $200,000 as her threshold. If someone offers her $205,000 the first day the ad appears in the local real estate listings, she'll take it. Of course, she would *rather* have a higher bid, and she knows that by accepting the $205,000 offer she may well be missing out on a higher offer. But she has decided that anything over $200,000 is "good enough," or satisfactory (Dreier, 2004, p. 132).

This seems like a straight-forward application of satisficing. Certainly it would be a good advice to Hannah not to follow the crude maximising principle; if she continues to wait for the "best" offer without any restrictions, she may find herself stuck with the house forever. However, another – seemingly just as reasonable – explanation of what goes on here is that Hannah optimises, i.e. maximises under certain constraints ($200,000 is an acceptable price given her limited time and any other opportunity value she may lose out on waiting too long).

We should be wary of this interpretation though. One sense of optimising is merely a description of what happens when we choose something over another. Optimising in this sense is also something infallible (Dreier, 2004, p. 138; Richardson, 2004, p. 111) and as such defeats any normative function it may play. Rather we should allow room for three distinct principles of rationality: satisficing, optimising and maximising. Following David Schmidtz (2004, pp. 31f), I believe, we should distinguish optimising from satisficing in the following sense: if we assume a typical choice situation in which we do not have full knowledge about all alternative courses of action nor of their utility beforehand, then optimising is the strategy of accepting the following constraint on the search: choose the best outcome given X (say, a period of time); whereas satisficing is the strategy of choosing the first satisfactory outcome. It may be said, then, that optimising and satisficing are different stopping rules: the former recommends stopping when the utility of continued search is less than the utility of the best option so far, and the latter stopping once a satisfactory alternative has turned up. Given this, there are clear cases in which optimising and satisficing diverge. And even in the cases which they issue in the same recommendation, the "[s]atisficers select the satisfactory alternative because it is satisfactory, not because it they calculate that stopping the search at that point would maximize utilty" (Schmidtz, 2004, p. 32). It is plausible to see Hannah's strategy as being one of satisficing rather than optimising. An optimising strategy would have been for her to, for instance, scan the market for a period of time after which she would decide that continued waiting would not pay off and pick the best offer available at that time. Thus presented, we see that also the optimising strategy relies on

some kind of expected utility calculus.[9]

Based on this logic, the claim I now want to make is the following: with respect to climate change abatement we have reasons to satisfice rather than to optimise; or, in other words, we ought to accept a satisfactory solution (if one is available) to act sooner rather than later, even if it is less than optimal. This has to do with what was discussed in the previous section, and in particular, the fact that we have reasons to believe that our choice situation will not improve and an optimum may be impossible to reach in any case.

Before the "good enough"-solution is further specified, we should address a more general difficulty which has so far been glossed over, namely how we can make sense of 'good enough' without assuming a global metric, such as preference satisfaction, which would make all the problems of the alternatives discussed reemerge (Richardson, 2004). One alternative strategy would be to define 'good enough' by making pair-wise comparisons of options through eye balling (i.e. partial ranking), but there are reasons to doubt the viability of this too. To see why, consider a general background assumption that we have not explicitly discussed so far, namely the incommensurability of values or final ends. This is partly what makes satisficing seem intuitive in the cases considered above. However, given incommensurability of values it seems hard, if not impossible, to generate a metric of value comparison, at least as a direct generalisation on such a basis. Given incommensurability and other practical features of values, any kind of preference ordering (partial or full) may be called into doubt. If we really lack access to a global metric in our everyday decision making, then satisficing may be just as problematic as optimising.

Instead we should follow a suggestion made by Henry Richardson to interpret satisficing as accepting that sufficiently many of one's concerns or commitments are cherished rather than as a 'good enough' point on some preference satisfaction metric (Richardson, 2004, p. 118). The proposal is further clarified by a distinction between (non-dispositional[10]) desires, on

[9]It should noted though that this claim only concerns the viability of satisficing in a local context. There are good reasons to doubt the possibility of global satisficing. If the project to which satisficing is to be applied is as general as, for instance, pursuing the good, it is very hard to understand how anything less than maximum can be rationally preferred (Richardson, 2004, p. 108; Dreier, 2004, pp. 138ff), though perhaps often in the form of the kind of "subtle optimising" (Schmidtz, 2004).

[10]Talk about desires is ambiguous in the philosophical literature. Here I am referring to something closer to everyday language use than to some of its attributed technical philosophical meanings. In particular, I am not referring to the technical sense of a 'desire' as a disposition to ϕ (see, Smith, 1987). 'Desires' in this context – in contrast to the dispositional use – are attitudes with a particular kind of phenomenology (for instance, "the feeling of being pleasantly attracted" (Street, 2012, p. 43)) but without propositional

the one hand, and final ends or values, on the other hand. If we think of the conflicting values in the examples as being desires, it will be hard to understand how anything less than optimising can be rational (even locally). If, however, we think of it in terms of final ends, values, practical commitments, or normative judgements, then satisficing can be understood as a rational. Final ends are self-regulating in the following sense: "the judgement involved in (being committed to) pursuing x for the sake of y is that it is appropriate to look to y in modulating one's pursuit of x (and not vice versa)" (Richardson, 2004, p. 122). This also means that final ends involve a kind of self-limitation unlike (non-idealised) desires: "Your traditional desires *for food* or *for sex* build no limits into their content; limitation comes with obstacles and with satiety, when the desire in question wanes in strength" (Richardson, 2004, p. 123). Sharon Street makes the same point slightly differently:

> The state of mind of *desiring* the end does not constitutively involve *desiring* what one is fully aware is the necessary means to that end [...] In contrast, the state of mind of *taking oneself to have a reason* to pursue an end constitutively involves *taking oneself to have reason* to take what one is fully aware is the necessary means to that end (2012, p. 43).

To have a final end, similarly to making a normative judgement, means recognising internal limits and extensions on its object. When we are faced with conflicting final ends or normative judgements it is not advisable to adopt an optimising strategy. A better method is to scrutinise the values from a practical point of view, thinking about which are more basic than others and on whether there is some superordinate end. If the conflict is genuine and persistent, one may need to recede to "decision making under unresolved conflict" (Levi, 1986); and in cases involving many persons the related ideas of achieving an "overlapping consensus" (Rawls, 2005 [1993]), as will be developed below, or an "incompletely theorised agreement" (Sunstein, 1994) are relevant.

'Good enough' can be understood as a solution to the tension between normative judgements that underlies the problem area of climate justice: i.e. the unacceptability of high risks to future people, on the one hand, and the embracement of certain development practices, on the other hand; these judgements are irreconcilable and there may be no optimal solution to the

content. Together with the dispositional usage, though, we should say that 'desires' have a world-to-mind direction of fit, i.e. they are not necessarily given up on realising that the they do not fit the world (that the world is different than what is desired), instead they aim to change the world somehow.

tension they give rise to in conjunction. It may, however, still be possible to find a 'good enough' solution, which reasonably should be understood as an acceptable level of risk in our continued engagement in emission generating activities. We can thus tie this discussion of satisficing with the more general topic of this chapter, that is sufficientarianism. With respect to the intractable climate change problematic, we have reasons to be sceptical of the two most common principles of practical reasoning, optimising and maximising, and instead favour a satisficing approach. In this context this means that we should make sure that values of sufficient number and importance are respected while we await a better solution. More specifically, my general suggestion is the following: we should avoid high risks on the provision of basic needs, both presently and in the future, while promoting development. This claim is corroborated by the facts that the climate situation is such that the search for an optimal solution may cause a dangerous delay and that we have good reasons to believe that risks to the basic needs of future people are something we will find unacceptable.

4.3.4 A Reliable Criterion

A further reason to opt for a sufficientarian needs-principle in the present context is also related to the uncertainties faced: such a principle is a more reliable criterion for distribution of resources over time compared to more subjective measurements based on wants, desires or preferences. This point was essentially made already in the preceding chapter, under the heading "Objective and Subjective Needs". There I argued against the usefulness of using subjective measurements (such as revealed preferences) as a basis for climate justice and in favour of an objective, in the sense of practically convergent, needs-principle. No matter how uncertain we may be about what future people will desire, we can be sure that there are certain things they will need no matter what specific objects or activities they will find worthwhile. The prerequisites for a decent life, including the ability to participate actively in a society, are such that it is inconceivable that we could take them away from future people without harming them in any way. That people today have so and so strong preferences for biodiversity, or that the market suggests that people value future outcomes to this or that extent, are in comparison not reliable criteria for what matters with respect to the future.

4.3.5 An Overlapping Consensus

The sufficientarian needs-principle has the additional advantage of being the possible focus of an overlapping consensus of reasonable comprehensive

doctrines, to use Rawls's terminology (2005 [1993]). It can be derived from a plurality of moral (and possibly religious) views, without having to assume that any of such comprehensive views is the correct one. In a modern society composed according to pluralism, where various and possibly incommensurable sets of values, worldviews, religious systems and moral convictions seem to permanently co-exist, this is a great benefit. If we can motivate some measures to be taken against climate change in ways which do not invoke long-standing debates between such competing views, so much to the better.

Rawls's idea of an overlapping consensus was that each reasonable comprehensive doctrine could endorse a political conception of justice from their own point of view.[11] He contrasted this conception of justice with those that put forward their own comprehensive doctrine as the one true answer. He argues that "[o]nly a political conception of justice that all citizens might be reasonably expected to endorse can serve as a basis of public reason and justification" (Rawls, 2005 [1993], p. 137). The reason for this is related to the need for stability of a political conception of justice. That the basic structure of society as regulated by a political conception of justice is stable over time is assumed to be important, but not just any kind of stability matters. The stability appealed to in the argument for an overlapping consensus is not in the sense of enforced compliance or absence of opposition due to harsh oppression; the important thing is that citizens can affirm a political conception of justice for moral reasons, and more specifically, moral reasons springing from their own reasonable moral views. Only in that way can citizens who are free and equal yet deeply divided by various comprehensive views stably co-exist in a society over time.

Although Rawls's idea of an overlapping consensus was presented with a rather broad scope, including in its focus not only democratic rights but also freedom of thought and "principles covering certain basic needs" (2005 [1993], p. 164), I do not think it can be applied directly to the argument I want to make. What can be deduced straight away, I believe, is that any proposed argument for addressing climate change that threatens to undermine the prospects of meeting present basic needs will be found unreasonable on a political conception of justice. If we care to maintain the basic structure of society, climate change action should not be motivated on such grounds. What is perhaps less obvious is whether the sufficientarian principle applied intergenerationally would also hold such ecumenical support. My contention

[11] A reasonable view could be defined as one which affirms the "values of public reason", which "not only include the appropriate use of the fundamental concepts of judgment, inference, and evidence, but also the virtues of reasonableness and fair-mindedness as shown in abiding by the criteria and procedures of commonsense knowledge and accepting methods and conclusions of science when not controversial" (Rawls, 2005 [1993], p. 139).

is that it would. The idea in its outline is the following: first, any reasonable moral, philosophical or religious doctrine engaged in political reasoning must also partly address the future to some extent; second, the sufficientarian principle of not meeting present non-basic wants at the expense of risking basic needs of future people is justified in a society that is to persist over time; third, the scope of the sufficientarian principle does not only cover a society's own citizens but all those potentially affected by its development. This argument will be further developed in the succeeding chapter. What is important here is that the sufficientarian needs-principle holds the possibility of gaining full support of individually conflicting comprehensive doctrines of a pluralist society. In this way it is a workable conception of justice, well adapted to the situation of climate change.[12]

4.4 Is Sufficientarianism Redundant?

With the resources now provided, we should reconnect the sufficientarian view presented to the general discussion from section 4.2. In particular, it should be related to Rawls's theory of justice, 'justice as fairness'. This is important as this comparison is prevalent both among critics and proponents of sufficientarianism.[13] Casal concludes her critique of sufficientarianism in the following way: "justice as fairness already contains some of the most appealing convictions animating the sufficientarian critique, as well as various threshold principles more plausible than those sufficientarians propose" (2007, p. 323). I think she is right in the claim that justice as fairness has these sufficientarian constraints, for reasons similar to the ones highlighted in this chapter; namely because of nonideal situations. However, contrary to what seems to be Casal's contention, I believe that there are good reasons to single out the concerns of the sufficientarian approach as a focus – at least in the

[12]One might wonder about the scope of an overlapping consensus in the climate context: which needs are such that they may safely be assumed away from the political agenda, and which needs are the objects of reasonable dissensus? In reference back to the preceding chapter, the somewhat disappointing answer is that we lack the resources to give a more determinate answer as to what the exact contours of the principle of precedence are. Certainly all reasonable views held in a contemporary society include a priority for the survival needs of others, but likely the could converge on something more than that too. The question must be further answered in a reflective political process specific to each society.

[13]Remember the discussion from chapter 2, where Oluf Langhelle explicated the conception of sustainable development in terms of a Rawlsian theory of justice (2000). Another example is Clark Wolf who argues that "the Brundtland Report's conception of sustainability is simply a special case of a more general [Rawlsian] first principle of justice" (Wolf, 2009, p. 367).

climate context – as opposed to subsuming them under a more general view such as justice as fairness.

To see why, we should briefly describe Casal's proposal. As is well-known, Rawls's justice as fairness contains two principles of justice: the first guarantees equal basic rights and liberties, and the second splits into two parts, where the first is the 'equal opportunity principle', and the second is the 'difference principle'. Casal now points to the fact that Rawls amended to these some (sufficiency) constraints. The first principle of justice arguably is constrained by a guaranteed social minimum, and more apparently Rawls proposed a 'just savings principle' as a constraint on the difference principle (Casal, 2007, pp. 323-6).

The first of these is not clearly presented as a constraint in Rawls's doctrine of justice as fairness. Casal points to the following passage from Rawls, where he argues that any reasonable conception of justice should offer "measures ensuring for *all citizens* adequate all-purpose means to make effective use of their freedoms" (Rawls, 1997, p. 774). But it is not at all obvious from the passage quoted that Rawls puts this forward as a constraint inherent to the first principle of justice; an alternative reading is that he took it to be a necessary condition for the workings of any theory of justice. It is presented in a discussion about the general features of what Rawls calls, 'political conceptions of justice', i.e. what is required of any theory of justice by the idea of public reasoning. It says nothing about the internal ordering of the principles of justice, as that is specified elsewhere. In fact, Rawls quite explicitly argues, in other places, that basic liberties may only be restricted for the sake of other basic liberties, not for the sake of any other social goods (such as presumably what is needed for the exercise of those liberties). We should be reminded that Rawls tried to find a "political conception that is independent of any particular comprehensive doctrine" (Rawls, 2005 [1993], p. 180). Rawls wanted to keep comprehensive doctrines – such as perfectionism – apart from this more basic task of finding a common basis for public dialogue.

Furthermore, the first principle of justice is lexically prior to the second, according to the reasoning employed by Rawls in the 'original position'. This means that it is never justified to sacrifice any (however minute) amount of basic liberty for correction of substantial injustices (e.g., to infringe the freedom of press in order to feed starving people).[14] But this unintuitive implication is mitigated in two ways in Rawls's theory. First by the fact that it is an "ideal theory", applicable only to well-ordered societies; and, second by the fact that the difference principle in practice prevents such

[14]The example is purely hypothetical though, as Rawls took severe social poverty to be inconceivable in a well-ordered society, for reasons specified below.

unpleasant results (cf., Rawls, 2001, pp. 127ff). Even so, it remains a worry in the Rawlsian account that the lexical priority of basic liberties over socio-economic goods could lead to disastrous results. It is thus seems that we rather need to counter Rawls than to look for support; sufficientarian reasoning could possibly correct a weakness of the account. Now, these worries about Rawls's ideal theory are not novel and unknown. Rawls himself was very well aware of these potential problems. For instance, in *Political Liberalism* he wrote:

> The first principle covering the equal basic rights and liberties may easily be preceded by a lexically prior principle requiring that citizens' basic socioeconomic needs be met, at least insofar as their being met is necessary for citizens to understand and to be able fruitfully to exercise those rights and liberties" (Rawls, 2005 [1993], p. 7).

Whether we should read Rawls here as actually proposing this amendment or not, it can be noted at any rate that such lexical priority of basic needs would obviously generate exactly the kinds of problems that Casal used to criticise sufficientarianism.[15]

When it comes to the just savings principle it is, however, beyond doubt that it was put forward by Rawls as a sufficiency constraint inherent to his theory (as a constraint on the difference principle) (Rawls, 1971, pp. 284ff). However, in order to understand the motivation for this amendment we must look to a specific instance of Rawls's nonideal theory. If the stable existence of a well-ordered society is assumed at the outset, it would not make sense to save for the creation and maintenance of just institutions. However, as we have reasons to believe that a stable institutional order may not persist, we must have some principles for this event too. These are found in a specific instance of Rawls's account of nonideal theory. To repeat what was said in chapter one, Rawls defined nonideal theory as the study of "the principles that govern how we are to deal with injustice" (1971, p. 8). It was further argued that Rawls, at various places, understood injustices as noncompliance. However, the arsenal for the just savings principle does not come from noncompliance (at least in its ordinary sense), but rather from a second – and less noticed – part of Rawls's nonideal theory, namely injustices due to "natural limitations and historical contingencies" (Rawls, 1971, p. 246). We will return to the vindication of the just savings principle in the subsequent chapter, but can

[15]It could be one of the reasons for why Rawls did not pursue this amendment to the theory. Another reason, again, is that given his ideal conception of justice, where the theory only is applicable to well-ordered societies, a basic needs principle is likely to become redundant.

now only note that it should reasonably be understood as transitional to a well-ordered society. From Rawls's relatively meagre treatment of nonideal theory we learn that, if it is to be adopted, the principle should be designed in ways which are morally permissible, politically possible and likely to be effective (Rawls, 1999, p. 89). These are, however, but the rough contours of an approach to the questions of relevance in the present context. It is not straight-forwardly clear how the principle should be specified and defended, as we will see in the following chapter, neither is it clear that it is the most appropriate response to the non-ideal conditions described in this chapter. What is clear, though, is that it is premature to rule out sufficientarian reasoning in light of the problem considered. If Rawls's 'justice as fairness' is relevant whatsoever for the problem of climate change, it has to do with its nonideal parts that are not very well worked out as of now. Moreover, due to the complexities of the climate context, there might be good reason to focus the attention on working out a sufficientarian principle in isolation rather than as a part of a more general theory of justice.[16]

4.5 Conclusion

The objective of this chapter was to explicate the ideas of justice behind the concept of sustainable development. The natural answer is to think of it as a kind of sufficientarianism, normally understood as the principle that what we owe to others in terms of justice is enough resources to get by. Such views are, however, widely challenged and rightly objected to on account of counterintuitive implications. I argued that we should not base the conception of sustainable development on such a principle, not even in the specific climate context. There are, however, specific features of this context that call for a reassessment of our standard principles of practical reasoning. I argued that neither maximising nor optimising utility are plausible decision making procedures when faced with the problem of climate change. Instead I proposed a satisficing approach, which is a means of working around and only partially resolving some of the deep and intractable conflicting values faced. I argued that we have reasons to at least avoid passing on unacceptable risks in our continued development practices. An alternative view was also

[16]That is not to say that climate justice should be sought and implemented in isolation from other considerations of justice. The claim here is merely that there might be good reasons to work out a principle of climate justice on basis of the specific characteristics of the climate context (where certain assumptions are reasonable and others are not, as has been argued above). We will return to the question of whether climate justice should be isolated or integrated within a broader justice agenda in chapter six. See also Caney (2012, p. 259).

considered in the Rawlsian approach, with implicit sufficiency constraints. I argued that though this is promising in several respects, it is insufficiently worked out. In the following chapter the task of spelling out the demands of intergenerational (climate) justice is carried on. There we will also further explore the limits of the Rawlsian approach.

Chapter 5

Intergenerational Climate Justice

> How had he allowed himself to be lured into her fantasy; and why had the news of her attack, so predictable and logical, disturbed him? Terrible things did happen. Wishful thinking was negligent, dangerous, and in the case of Elsa Bruner might even prove homicidal. But if Elsa was guilty of denial, Mitchell at least was an accomplice, and that was the old familiar problem: analysis without action.
>
> — *Odds Against Tomorrow*, Nathaniel Rich (2013)

5.1 Introduction

It has been known for some time that what we call 'development' is accompanied by negative side-effects that seriously threaten the livelihood of future people. At the same time it is fairly uncontroversial to assert that we need more development as "hunger, squalor, disease, and early death"(World Commission on Environment and Development (WCED), 1987, p. 27) still persist for many people in the present. The Brundtland slogan of 'meeting the needs of the present without compromising the ability of future generations to meet their own needs' is in this sense straight-forward: development must be promoted, but only in ways which do not undermine its long-term persistence. In this chapter the ambition is to dig deeper into this simplified interpretation, to vindicate as opposed to merely assert the principle. In doing so questions will be raised about why we should care about the ability of future generations to meet their needs. If you are in doubt about the need for a philosophical justification for such a basic requirement, then think about those individuals, politicians and business-leaders who seemingly display little or no concern for anything but their own immediate future; or think about the rhetorical divice of discharging our obligations to posterity by simply keeping the wheels

of consumption rolling. The need to specify the reasons for respecting the needs of future people seems evident. In this context, it takes the form of the following question: what do we owe to our successors in virtue of the contribution we are making to climate change? From policy documents – in particular those of the UNFCCC – we know that the general ambition is to limit climate change below dangerous levels. But how should that imperative be understood?

To undertake this work, the possibilities of intergenerational justice in general must be assessed. In the following section, 5.2, we will begin with one of the most common positions, namely consequentialism. Soon we will notice that the intuitive intergenerational maximising that consequentialism proposes runs into serious problems. In particular we will see how such a position has to grapple with some absurd and repugnant conclusions from its seemingly acceptable assumptions. Much of the difficulty it faces relates to uncertainties concerning the well-being of future individuals (will they be richer/poorer; will they be more/fewer in numbers; will they be harmed/benefited by our actions, etc.). As we proceed, however, we will see that some of these problems are not only related to the idea of maximising in situations of uncertainties and unknowns, but are more general still. Another candidate position, the application of Rawls's difference principle to the intergenerational setting runs into similar problems. We will see how the lack of connection to future individuals presents an obstacle to richer and more thorough redistributions between generations. Other obstacles come from limited moral abilities, temporal asymmetries (we can affect them, but not vice versa), and problems of compliance. This seems to make these traditional positions unpromising bases for intergenerational climate justice.

The next thing, in section 5.3, is to think about what remains. Do we have sufficient material to vindicate an intergenerational needs-principle (if not, a maximising or a difference principle)? The contention is that we do, and the argument will be that *for practical purposes* this is sufficient. This conclusion is arrived at through the constructivist method of practical reasoning mentioned in previous chapters, and in particular it can be thought of as an elaboration of the sufficientarian principle proposed in the preceding chapter. On the most general level in this setting, the principle is the following: present day activities must not create an unacceptable risk to the possibility of distributing resources in a future world in such a way that everyone's basic needs *can* be met. The defence begins by specifying the scope of intergenerational justice from a practical point of view. That is, what is the relevant scope assumed in present day development activities? The answer, I will argue, is that this is settled by assumptions made in these very activities. In engaging in such activities assumptions are made about the connection

to future others with specific powers, which amount to commitments laid upon ourselves as conditions for the successful execution of the actions. These commitments or obligations minimally involve a respectful treatment of others' agency and apart from that varies depending on the specific situation.

Doubts can be expressed about this proposal. For instance, it may be argued that it does not express a duty of justice, but rather a recommendation of good will. There are two possible interpretations available. According to the first, the present day agent is *morally obliged* not to risk the provision of basic needs of future people. However, as we will see, it is not straight-forward how such a justice-based duty may be vindicated. According to the second interpretation, the intergenerational reasons alluded to in the Brundtland slogan appeal to our good nature or care; that is, it would be *good* of us not to risk the provision of basic needs of future people. The status of the principle is determined by its justificatory ground, which will be thoroughly discussed in section 5.4. The argument will be that the needs principle indeed is a requirement of justice; it is a universal principle of action valid for all agents. That said, its scope and exact specification is underdetermined and varies according to context and agent. Commonly, however, all agents have reasons to take on certain precautionary measures related to their future-oriented activities.

Finally, in section 5.5, two remaining problems, namely that the principle here defended implies too little or too much savings, and the non-identity problem, will be responded to.

5.2 The Impossibility of Intergenerational Justice

On a general level it can be said that for consequentialism intergenerational justice is fairly straight-forward: the fact that some of the consequences of our acts happen in the future rather than now is of no moral importance. However, once we try to specify our obligations with regards to future people, different specifications will face various problems. This can be shown through the distinction between 'impersonal' and 'person-affecting' moral theories (Parfit, 1984).

Traditional consequentialism is impersonal and roughly argues for an obligation to maximise overall utility. This position faces several intractable problems; in the present context, the so-called "repugnant conclusion" may be the most worrisome. If it is only the total amount of utility that matters, maximising could be done either by improving the welfare of already existing people or by increasing the number of people existing. Let us assume that if we add people to the world the average well-being, and therefore utility, will

decrease somewhat. However, granted that the quality of each life decreases less than what is gained quantitatively from the addition of new lives, the *total* sum of well-being of the world is improved by adding persons. Consider a comparison of world A and B: "In B there are twice as many people living as in A, and these people are all worse off than everyone in A. But the lives of those in B, compared with those in A, are *more than half as much* worth living" (Parfit, 1984, p. 385). That is, what we lose in terms of average well-being is outweighed by the gains in terms of added persons to make the overall utility level higher in B than in A. We are then, by a series of such steps, drawn towards a world, Z, with "an enormous population whose members have lives that are not much above the level where life ceases to be worth living" (1984, p. 388). We thus arrive at what Parfit calls the repugnant conclusion:

> *The Repugnant Conclusion*: For any possible population of at least ten billion people, all with a very high quality of life, there must be some much larger imaginable population whose existence, if other things are equal, would be better, even though its members have lives that are barely worth living (1984, p. 388).

In order to avoid (or, at least, mitigate) similar such problems a consequentialist could adopt a "person-affecting" restriction, which says that an outcome can only be better than another if it is better for someone; alternatively, that "bad" acts must be "bad for" someone (Parfit, 1984, p. 363). Person-affecting consequentialism is naturally supplemented with an "all affected principle" (Heyward, 2008), which states that all those affected (or potentially affected) by an action or decision should be included in its justification or deliberation. If we should act so that the (expected) utility is maximised for all, then we must include all (potentially) affected, irrespective of geographical and temporal remoteness.

However, when applied to non-existent future people, this restriction is problematic. The main worry is what Parfit calls the "non-identity"-problem. When we compare two alternative acts or policies, A and B, where A seemingly will harm future people, the person-affecting restriction should specify that B is preferable since it is better than A *for someone*. However, for certain such choices the identities of the people of A and B are different, that is, there are different people that will live in A than in B. The explanation is simply that the identity of a person is highly sensitive to the timing and manner of the conception; if slightly altered a different person will be born (Parfit, 1984, pp. 351ff; Roberts, 2009). In what way can then A be said to be worse than B? In other words, for whom is A worse than B? As an example, say that A is the

continuation of business-as-usual with unmitigated climate change as a result, and B is a radically reoriented economy (without loss in either average or total utility) that prevents dangerous climate change (Broome, 1992; Page, 2006, pp. 133ff). It seems that B is better than A, *ceteris paribus*, but this may not be possible to account for under the person-affecting restriction. The possible people of A will surely experience a great many negative consequences as a result of that choice, but if it were not for the choice of A they would not have existed at all. Thus, assuming that they still have lives worth living, in what sense can it be said to be better to choose B rather than A, to mitigate climate change rather than continue with business-as-usual?

The non-identity problem can be generalised as follows. Any purported claim of historical injustice needs an argument as to how the allegedly harmed person really is harmed if the "harmful" act also is a necessary condition for her existence (Cohen, 2009). Consider, for instance, cases of reparation, such as war reparation or slave reparation: are contemporary slave descendants harmed or wronged, and thus owed compensation, by the historical institution of slavery, when that is also a necessary condition for their existence (Cohen, 2009, p. 82)? On this reading of the non-identity problem a promising solution to it, namely an appeal to rights, is cast in doubt. It is not enough to argue that future persons have rights that are being violated by our choice of A. If A is a necessary condition for the A-people to exist, it may be that they would waive any such right (Parfit, 1984, p. 364; Page, 2006, pp. 143ff). This line of reasoning leads to the provocative conclusion that the mere existence above a minimum sufficiency level (where life is barely worth living) is sufficient compensation for any serious injuries we could inflict on future people in non-identity cases.

Problematic as the non-identity problem is, there are ways around it. But it is at least a standing concern for any person-affecting theory. Together with the other problems introduced by Parfit – in particular, the repugnant conclusion – one should be somewhat hesitant about the possibilities of presenting a maximising consequentialistic account of intergenerational justice. There might even be so-called "impossibility theorems" in the path of a reasonable explication of a consequentialist theory in this context (Arrhenius, 2000, 2011). There are, however, other ways of bypassing this problem, which we will return to below in section 5.5.

We should first mention yet another problem for maximising consequentialistic intergenerational justice, namely that it implies excessive (and seemingly unfair) sacrifices. This critique essentially is a reiteration of Rawls's charge against utilitarianism. He wrote:

> Since from a moral point of view there are no grounds for discounting

> future well-being on the basis of pure time preference, the conclusion is all the more likely that the greater advantages of future generations will be sufficiently large to compensate for present sacrifices. This may prove true if only because with more capital and better technology it will be possible to support a sufficiently large population. Thus the utilitarian doctrine may direct us to demand heavy sacrifices of the poorer generations for the sake of greater advantages for later ones that are far better off (Rawls, 1971, p. 287).

As stated above, there is no principled reason to count the preferences of future people any less than those of present people. If we are thus to maximise we are forced to compare the utility of the present generation to that of the vast and rich mass of future generations in deciding whether to consume or save for the future. That choice will direct the present generation to make great sacrifices even if each later generation will be better off.[1] Thus, besides the repugnant conclusion, the mandating of unfair sacrifices may be another adverse implication of total utilitarianism. The problem is structurally similar to one that can be charged against utilitarianism intra-generationally: if we need to sacrifice some individuals or groups of individuals in order to maximise total utility, this is what we should do.[2]

A possible answer to Rawls's challenge would be to appeal to the law of diminishing marginal utility, according to which utility is maximised by redirecting the most resources to the worst off generation. If we then – perhaps somewhat implausibly – assume that the present generation is the worst off generation, it may be argued that our obligations towards coming generations are somewhat lessened, perhaps to a "fair" level. However this is not unproblematic either. Firstly, such argument might substitute unduly excessive demands for no demands at all: assuming that all later generations will be better off on average than the present generation, and thus that any benefit would be better spent presently, would this release us from any intergenerational obligations? Secondly, as was thoroughly discussed in the preceding chapter, we lack the information needed to assess which generation is worst off and may thus struggle to comply with intergenerational maximising. We need to know both who will, directly or indirectly, be affected by us doing something here and now, and to what extent they are benefited or harmed

[1] It should be noted that this worry of Rawls was expressed in a very different age than ours (over 40 years ago), when the hopes and prospects for continued economic growth may have been brighter than today. Now it is not at all evident that all subsequent generations will be better off than the present. Even so, I believe, it is possible to argue that intergenerational utilitarianism has the wrong focus.

[2] See, for instance, the classical critique of utilitarianism expressed by Foot (1978 [1967]) and Thomson (1985).

on account of that.

The maximising feature of consequentialism partly explains this implication as it makes the theory insensitive to other distributional effects. If we thus deem that the application of consequentialism is problematic, the possibility for intergenerational justice may seem narrow. However, the problem is worse still as it can easily be generalised. Another element of the intuition at play here is that intergenerational savings are unfair in the first place (cf., Gaspart and Gosseries, 2007). It is telling that Rawls did not only conclude that maximising total utilitarianism gave counter intuitive implications when applied intergenerationally, but also that his own maximin reasoning rendered such results. He wrote:

> It is now clear why the difference principle does not apply to the savings problem. There is no way for later generations to improve the situation of the least fortunate first generation. The principle is inapplicable and it would seem to imply, if anything, that there be no savings at all (Rawls, 1971, p. 291).

The most fundamental reason that Rawls's intergenerational theory is not based on the difference principle has to do with his institutional view of justice (as mentioned in chapter one): because generations are spread out in time and lack genuinely reciprocal relations "the question of justice does not arise" (Rawls, 1971, p. 291). We could however, for expository purposes, think about why the difference principle would fail in this application (if it, contrary to Rawls's view, was taken to be relevant in the first place).

In other words, why can we not amend a transgenerational difference principle – as, for instance, Attas (2009) has suggested – to Rawls's theory of justice? The reason has to do with there being relevant differences between the intergenerational and intragenerational setting (cf., Gardiner, 2009). Rawls asserted that intergenerational questions "[subject] any ethical theory to severe if not impossible tests" (1971, p. 284), which seems to cast an "extension strategy" (Gardiner, 2011a; cf., Rawls, 2005 [1993], p. 20) in doubt. It is worthwhile to closer assess why such a strategy fails. Consider first a summary of the principles of 'justice as fairness' (Rawls, 2005 [1993], p. 271):

> *First principle:*
> Each person has an equal right to the most extensive scheme of equal basic liberties compatible with a similar scheme of liberties for all.
> *Second principle:*
> Social and economic inequalities are permissible provided that they are:
> (a) to the greatest expected benefit of the least advantaged (the differ-

> ence principle); and
> (b) attached to positions and offices open to all under conditions of fair equality of opportunity.

Rawls's well-known vindication of these principles, which are to regulate the basic structure of society, runs as follows: these are the principles that would be chosen by free and rational parties under the 'veil of ignorance' (in the 'original position'), not knowing which specific roles they would occupy in a society. Among other things, the veil of ignorance masks which generation the parties are part of (Rawls, 1971, p. 137). This lack of information "is appropriate in part because questions of social justice arise between generations as well as within them, for example, the question of the appropriate rate of capital saving and of the conservation of natural resources and the environment of nature" (1971, p. 137).[3] On this basis it would be natural to assume that the parties of the original position should also have reasons to adopt a principle of intergenerational justice. However, this turns out to be problematic. The veil of ignorance guarantees that the principles chosen are fair to everyone, with one exception. "The one case where this conclusion fails", argues Rawls, "is that of [intergenerational] saving" (1971, p. 140). Even if the original position were set up to generate intergenerational justice, it could not succeed in this task since the difference principle could not be rationally adopted in the original position because of the situation of the first generation (Rawls, 1971, p. 291; English, 1977, p. 92; Gardiner, 2009, pp. 110f; McKinnon, 2011, pp. 32ff). To see why we must more closely consider the assumptions made in the original position.

Since the parties in the original position do not know which generation they are a part of, how rich or developed their society will turn out to be, they must "ask themselves how much they would be willing to save at each stage of advance on the assumption that all other generations are to save at the same rates" (Rawls, 1971, p. 287). The choice of a generational savings rate thus is the choice for all generations. Rawls presents two different interpretations of this model: the "general assembly"-version and the "present time of entry"-version. According to the first idea the original position is composed of representatives of all actual and possible people gathered in a

[3]The observant reader here notices that Rawls seems to suggest that questions of justice do arise in the intergenerational setting (contrary to what he claimed in the quote above). This is not the place for deeper exegetical remarks, I can only note my interpretation: I believe that the explanation is that the quote from earlier on in his work (p. 137) is meant to highlight an intuition commonly shared about intergenerational (in)justice, which later on (p. 291) is shown to be best accounted for not as a question of justice. As soon will be clearer, the intergenerational setting is in important respects different from the intragenerational setting, and different considerations thus apply.

"general assembly", and the choice is thus a direct model of an intergenerational contract. The second idea is that the parties are all part of one and the same generation although they lack information about which generation this is. On the general assembly version, where representatives of all generations gather under the veil of ignorance, the problem of the first generation would be the following: a principle of just savings would benefit all generations but the first, and accordingly cannot be freely and rationally accepted by all. Now this interpretation may be implausible in the first place, as Rawls reasonably concludes it would "stretch fantasy too far" (Rawls, 1971, p. 139; cf., Heyd, 2009, p. 172). However a similar problem arises even on the more plausible present time of entry-version, where the parties know that they are contemporaries: "[the parties] can favor their generation by refusing to make any sacrifices at all for their successors" (1971, p. 140). In fact, this is the rational choice due to time's arrow. "The previous generation have saved or they have not; there is nothing the parties can now do to affect that" (1971, p. 140). In terms familiar from the 'prisoner's dilemma', it could be expressed as follows: "[t]he dominant strategy for each and every generation rationally guides them not to save" (Attas, 2009, p. 190).

It is not obvious which conclusion should be drawn on basis of this problem (neither is Rawls's specific conclusion fully clear). One possibility is to argue that this shows that, if anything, intergenerational savings are unjust, as they require earlier generations to make sacrifices bound not to be reciprocated by later generations. Perhaps more reasonably, one could alternatively see it as a problem specific to the difference principle (and similar principles), but not as a general hindrance to any kind of intergenerational justice. This much at least is clear that, if we were to apply the difference principle intergenerationally, the conclusion would be "no savings at all" (Rawls, 1971, p. 291). What is also relatively clear is that what Rawls calls the "just savings principle", is quite different from his other principles of justice. For instance, its grounding and place in his theory is somewhat peculiar in comparison to the other principles. In section 5.4, we will further discuss the grounding, scope and status of the just savings principle.

What conclusions should we draw from the problems discussed so far? These problems may be solvable and the evidence presented here is not enough to dismiss any starting points to intergenerational justice. However, one might tentatively suggest that since these problems are generated by the intergenerational setting, there might be a morally relevant difference between this setting and the intra-generational ditto. If justice makes sense at all within the context of generational relations, it is harder to justify, at least on the traditional theories. Another conclusion concerns the fact that the problems so far discussed have been of a theoretical kind: could this signify

something? It may be hypothesised that on a more practical account we do not need to worry as much about all of the theoretical intricacies.

5.3 The Possibility of Intergenerational Justice

In chapter two I put forward a constructivist reading of sustainable development according to which the concept is the (abstract) solution to a practical problem. From such an understanding much of the task in working out a theory of intergenerational justice has to do with characterising the relevant practical problem, including agents and potential victims. In chapter three I gave a general defence of the priority of basic needs over non-basic needs and explained how this principle generally is a reliable criterion for distributing moral concern. In chapter four, I provided some needed characteristics of the problem: that greenhouse gas emissions are dispersed over space and time, that the effects are potentially crippling; I also argued that some of the standard models of practical reasoning may not be very useful given the uncertainties of the situation. That which follows will build a constructivist approach to intergenerational justice upon these conceptions. The main task – as in the general approach – is to specify the practical problem to which intergenerational (climate) justice is the solution. The most obvious challenge here has to do with the fact that the potential victims of greenhouse gas generating actions are currently absent; we must accordingly clarify assumptions made about people we do not yet know and of whom we have quite limited understanding. We do not even know their identities or how many they will be. The first question must thus be, following Onora O'Neill: "To whom must we (or: I) accord ethical standing in taking this action?" (1996, p. 97). This will lead us towards two needed specifications: of the identity of the agents and of the scope of the actions (or of the identity of the subjects).

Before we go on to address these questions it can be noted that a practical concept of justice has been common in the history of moral philosophy. The most well-known example may be David Hume's practical view of justice, according to which justice is "useful" in – what Rawls later called – 'the circumstances of justice' (Hume, 1978 [1739]; cf., Rawls, 1971). Brian Barry characterises Hume's position as follows: "the rules of justice cannot be subjected to criticism on the basis of independent criteria of justice because they define what justice is" (1978, pp. 207f). Rawls took up a similar, although more elaborated, position as a background to his concept of 'justice as fairness' (1971, pp. 126ff). These circumstances of justice can be summarised as follows: a moderate scarcity of resources (what Rawls called the "objective circumstances"), and moderate altruism and relative equality due to the

limited cognitive and physical powers of men (the "subjective circumstances"). In his later works, Rawls added to the subjective circumstances the "fact of reasonable pluralism" (2005 [1993], p. 66), that is, the persistent yet reasonable disagreement in a modern society.

Rules of justice on Hume's view thus facilitate mutual exchanges and interactions against these background conditions. They are accordingly conventional or artificially created for specific purposes, without a more profound basis. More concretely, the rules of justice on Hume's account concern property rules: under the circumstances of justice, it is mutually advantageous to accept and enforce the institution of private property. Conversely:

> Reverse, in any considerable circumstance, the conditions of men; produce extreme abundance or extreme necessity; implant in the human breast perfect moderation and humanity, or perfect rapaciousness and malice – by rendering justice totally *useless*, you thereby totally destroy its essence and suspend its obligation upon mankind (Hume, 2004 [1751], pp. 188f).[4]

Similarly Rawls described the circumstances of justice as "the normal conditions under which human cooperation is both possible and necessary" (1971, p. 126). Outside these circumstances it is not meaningful to talk of justice at all, either since successful collaboration and sharing is not possible due to absolute scarcity or because it is redundant in a world of abundancy. O'Neill helpfully puts it as follows: "[t]he circumstances of justice are in the first place, so to speak, the circumstances of injustice: they are circumstances which generate the problems for whose resolution justice is needed" (1996, p. 99). Rawls, Hume, and many others with them, treat justice as a solution to a practical problem (cf., Korsgaard, 2003, pp. 112ff). In this way justice is internal to the situation, without appeals to 'supreme' or 'true' moral values.

This constructivist approach to justice has its distinct advantages. If successful, it avoids "strenuous metaphysics", on the one hand, and "groundless" endorsement of actual practices, on the other hand. However, it wears its restrictions on its sleeve: justice is the solution to *a specific* practical problem (and that only). If the problem changes, there is no guarantee that the solution holds. This gives us a clear idea about the challenge of extending Rawls's justice as fairness as previously discussed. It comes from applying a solution specified for one problem (i.e. 'how are free and equal citizens to cooperate in a society?') to a completely different problem, *viz* the yet unspecified intergenerational problem. On the constructivist procedure we arrive at the solution of a practical problem by closely thinking about and

[4]Quoted from (Barry, 1978).

specifying that problem. This gives us an idea about how we must go about explicating the concept of a sustainable development: we must think about the problem/s of development that relevant moral agents face presently. If indeed the intergenerational problem of justice is different from the intragenerational ditto, we should be able to see this reflected in the assumptions made for acting in the one and the other setting. One way of getting at this possible mismatch is thus to think about the assumptions Rawls begins with to see whether others might be called for here. Let us begin by further specifying the intergenerational problem.

Climate change and environmental destruction are seldom presented or conceived of as practical problems.[5] Much of the problematic emerged from a theoretical scientific discussion, as was highlighted in chapter one. Even when it was transposed to a social and political context much of the theoretical costume was maintained. It may be said that pressure on biodiversity, resource exploitation and climate change are unfortunate side-effects of economic growth and development, or contended that it would be better if societies developed more sustainably, but rarely are successful development, economic growth and prosperity presented as entirely dependent on functioning ecosystems and a stable climate even though much evidence indicates just that (cf., Sachs, 2009; Stern, 2010a)[6]. In the Brundtland report this is central though:

> Economic growth always brings risks of environmental damage, as it puts increased pressure on environmental resources. But policy makers guided by the concept of sustainable development will necessarily work to assure that growing economies remain firmly attached to their ecological roots and that these roots are protected and nurtured so that they may support growth also over the long term (World Commission on Environment and Development (WCED), 1987, p. 40).

The contours of a practical problem are visible. In pursuing development and economic growth we make assumptions about the future, some of these concern the environmental resource base and its persistence. It is particularly obvious in cases where policy makers make future-oriented decisions about savings and investments, etc., but similar assumptions can be found at an individual level too when we think about the fate of our children and grandchildren or about

[5] With one noticeable exception being problems of adapting to a changing climate, which of course are urgently hands-on for those who get their livelihoods ruined.

[6] One can also note, following Jared Diamond's (2011), that in the history of failed or collapsed societies, such as the Easter Island, the Maya society, Norse Greenland among others, environmental destruction has often played a prominent role. Even if we should avoid environmental defaitism, it bears to remember that care for a society's (at least immediate) environment is crucial for its long-term survival.

spending our money on voluntary assistance; we can even go as far as to say that these assumptions are made in almost any activity that predictably has a long-term environmental impact, e.g., in constructing a coal-fired power plant or planning a new road infrastructure. The awareness of ecosystems in stress and the build-up of greenhouse gases in the atmosphere add something to such considerations: a practical problem. From the perspective of the conscientious policy maker it may present itself as 'how can we pursue poverty eradication and raise standards of living without thereby seriously compromising the vital ecological resource base which is vital for the enjoyment of these benefits?' From an individual point of view it may take another form, such as 'how can I provide for my (temporally distant) relatives while I inevitably add to global environmental problems?'. Given what we know about the potentially devastating impact of present-day greenhouse gas-generating activities, there is something reverberating in future-oriented activities.

The main argument I want to make is thus the following: in promoting development and economic growth we assume that future people will enjoy the fruits of it, however we also assume that it brings with it risks to future people. To coherently adopt these long-term development and investment strategies, whether they be public or private, we must also recognise and act upon the risks of development as a matter of adequate precaution. The recipe for constructing a sustainable development can thus be found in the reasons for pursuing development: if we have reasons to promote development we have reasons to make it sustainable. It bears to remember what was said in chapter two about the objective 'development' and proviso 'sustainable': "the proviso is entailed by the very goal whose pursuit it constrains" (Malnes, 1990, p. 7).[7]

With this in mind we could now return to the question of scope and give a more definitive answer. The question is: to whom must actions be justified? The simplest answer is that it is settled by the assumptions made in acting, which in turn depend on the situation and agent (see below). To begin with this can be distinguished from two traditional alternatives, perfectionism and communitarianism. On a perfectionist view the question of scope is answered by trying to come up with a criterion for who counts as an agent

[7]On basis of the wide definition of development, presented in chapter two (i.e. 'future-oriented activities and aspirations reflectively contemplated'), to pursue development might of course mean quite different things for different people in different contexts. Obviously I am not claiming that any engagement in development practices commits one to a concern for an indefinite time; to the contrary, development practices may be based on quite clearly delineated time frames, and be rather mundane too. The "proviso", that development must be made sustainable, obviously does not mean that each future-oriented activity must be possible to extend for eternity.

and who/what as a subject, which often leads to long and complicated detours into metaphysics. On communitarian views the question of scope is instead determined by whom we actually recognise as "ours", or as closely related to us, but brings with it the risk of arbitrariness (cf., O'Neill, 1996, pp. 91ff). In light of this, constructivism as a practical, yet non-discretionary method of determining ethical scope is more promising.

The constructivist alternative is further elucidated for the present purposes by O'Neill's way of determining the scope. She writes:

> when agents *commit* themselves to the assumption that there are certain others, who are agents or subjects with these or those capacities, capabilities and vulnerabilities, they cannot coherently deny these assumptions in working out the scope of ethical consideration to which they are committed (O'Neill, 1996, p. 100).

More specifically three assumptions are relevant to the question of scope: "*that there are others* (seen as *separate from* the agent); *that those others are nevertheless connected to the agent* (either or both can act on the other); and *that those others have limited but determinate powers*"; these are referred to as "plurality", "connection", and "finitude" (O'Neill, 1996, p. 101). Connection is specified as the assumption that "there are others to whom they are linked by some causal pathway" (O'Neill, 1996, p. 101, fn. 14). Plurality as the assumption of "sources of activity, however minimal, that are to some extent, however minimal, independent of an agent's own activity" (O'Neill, 1996, p. 102). Finally in assuming connection and plurality a correlate assumption will be that those connected others have specific "capacities, capabilities, and vulnerabilities". None of these assumptions are to be thought of as states of consciousness; "[a]ctivity may be premised on assumptions which agents deny, ignore, dispute or repress" (O'Neill, 1996, p. 101). Instead these assumptions are to be thought of as practically necessary for successful activity:

> agents seek to base activity on adequately accurate views about the world and its causal patterns, about their connections to others and about those others' capacities, capabilities and vulnerabilities, for the solid reason that inaccurate assumptions about any of these may lead to failure, to retaliation or to other harm or injury (O'Neill, 1996, p. 106).

Once we adopt this practical perspective, the problem of intergenerational justice becomes slightly different: to what extent are yet non-existent future people reflected in our moral considerations? As non-existent and thus impossible to individuate, it might seem that future people cannot figure

prominently in our actions. In the words of O'Neill: "activity by predecessors seemingly need rely only on vestigial assumptions about far future generations, yet sets the basic conditions of their lives" (1996, p. 115). Furthermore, it may seem as if the assumption of plurality is in doubt because, as was described above, the identities of future people are not yet determined. In fact, the existence, identity and size of future generations are dependent on the acts we perform now (cf., Parfit, 1984; Arrhenius, 2009). I believe that these worries are possible to overcome and that we can vindicate at least a basic needs provision even for far future generations despite the problems presented above.

Let us do this by further specifying the practical problem faced. On the basis of the three assumptions mentioned, it is obvious that it is not sufficient that activity generates greenhouse gases, which in turn cause climate change, in order for it to be condemned as unjust or unethical. Something more needs to be added, namely some kind of motive (as in the legal sense, not merely as a psychological drive). Most clearly this is seen by the absurdity that would result from holding people responsible for the addition of greenhouse gases resulting from their exhaled air; obviously people are not to be blamed for breathing even though this adds marginally to the build-up of climate change.[8] Instead it is to purposive human action and deliberation we must look. The obvious suggestion then is that the practical problem has its roots in the industrialisation, or what is sometimes called "modernity", i.e. the basic cause has to do with the accelerated exploitation of natural resources that intensified manufacturing and agriculture brought about. However, even if this is the root cause, it is not really the problem in itself. It was only when knowledge of the negative consequences of these processes surfaced, sometime between the 1960s–1980s[9], that the practical problem took form. When the other side of globalisation or modernity shone through, much as a result of the emergent environmentalism, something changed. It was no longer possible to think about industrialisation and modernisation in the same way; a practical problem was created. It was no longer possible to carelessly and unwittingly emit greenhouse gases and, by implication, promote development

[8]John Nolt (2011) has calculated that the human exhalation of CO_2 counts for something like 3-4 % of the total anthropogenic addition of greenhouse gases. The well-known environmentalist James Lovelock made the startling allegation that nature is "no longer in balance with our breathing", suggesting that the human population should be radically cut back, in a speech delivered to a public meeting of the Royal Society, 29 October 2007. See: http://www.jameslovelock.org/page24.html.

[9]The publication of Rachel Carson's *Silent Spring* (2002 [1962]) is usually thought of as the starting point of modern-day environmentalism, and where an environmental awareness started to seep up among politicians and the general public. However, the problem of climate change flew under the radar much longer, as was mentioned in chapter one.

and economic growth. Sure, it was possible to deny any connection between the burning of fossil fuel or deforestation and the emergent problem of climate change, but not with ease. Following this revelation something dissonated in such contrarian views.

The point is further reinforced by thinking about how these assumptions of intergenerational action have been denied in the present discussion. That is, when an agent makes certain assumptions about future generations in action and then struggles to deny or ignore them in its justification. In other words, an action relies on the connection, plurality and finitude of future people though this fails to register in the justificatory basis of that action. The denial may be of either or all of the assumptions. The denial of connection is usually expressed as follows: we are temporally distanced from future generations so we have no responsibility; or as an act of stipulation, for instance on the basis of Rawls's stipulation of a closed society (2005 [1993], p. 12). Rawls's stipulation is not necessarily a nuisance, as pointed out above it specifies *one particular* practical problem, though it may be so if this is the sole basis for denying or reducing concern for those outside of the society (more on this below).[10] The denial of plurality is manifested by talk of future people as an anonymous collective, e.g. talk of generations instead of individuals. Finally in much over idealised conceptions of future persons, portrayed as invulnerable to the negative effects of climate change, the denial of finitude takes form.

Stephen Gardiner's discussion of what he calls "moral corruption" (2011b) further illuminates such acts of denial. As the title of Gardiner's book suggests, he argues that climate change is a "perfect moral storm", meaning that it is the intersection of three separate moral problems (an intergenerational, an international and an environmental) that together make up an extraordinarily challenging problem. He writes: "the perfect moral storm centrally involve[s] serious asymmetric vulnerability, where those with a moral duty to act not only suffer little or no negative consequences from a failure to act, but also stand to benefit from that failure" (Gardiner, 2011b, p. 336), and "those who are damaged by them – the poor, future generations, animals, and the rest of nature – are poorly placed to defend themselves against it" (2011b, p. 304). Under these circumstances, Gardiner argues we are exposed to various forms of moral corruption in the forms of rationalisations, self-deception and moral

[10]Rawls recognises that a closed society is a "considerable abstraction, justified only because it enables us to focus on certain main questions free from distracting details" (2005 [1993], p. 12), and of course adds at least one other perspective in his (1999), the international/ the "Laws of Peoples". Even so one might criticise Rawls for the differential treatment of these two contexts as being mostly the work of stipulation (cf., Pogge, 2008, pp. 110ff).

manipulation.

Such potentially corrupting arguments in the climate discussion are grouped into five categories by Gardiner (2011b, ch. 9). (1) Disputing the application of moral claims, which could involve appeals to excessive burdens (overemphasising the burdens of action), or to prior entitlements, or to competing special relationships (local versus global, short-term versus long-term), or dismissals of "unreasonable advocates" (*viz.*, "some are tempted by the claim that there is something completely unrealistic (even utopian) about raising issues of global and intergenerational ethics in the current context" (2011b, p. 320)). (2) Claims that compliance has unintended negative consequences, such as portraying climate change action as opening the floodgates to massive redistribution, or as a serious threat to autonomy. (3) Reduction of the magnitude of the moral demand: for instance, demands of mutual benefit (i.e., assuming that climate change mitigation must be a win-win situation), appeals to limited budget constraints, diminishing the victims' needs, "shifting the playing field" (*e.g.*,"Infamously, [Bjørn] Lomborg claims that the climate change problem ultimately reduces to the question of whether to help poor inhabitants of the poor countries now or their richer descendants later" (2011b, p. 325)). (4) Undermining the implementation of the duty: discretionary aid, indirect methods (e.g. technological transfers). (5) Cultivating resentment on the part of the duty-bearer: lack of appreciation, recasting oneself as the victim (*e.g.*, those who argue in favour of climate action are "strongly biased in favor of the poor and the future, and care nothing of for us now. Given this, we are more than justified in ignoring their arguments" (2011b, p. 335)).

The point Gardiner wants to make is not that all of these "moves" are necessarily flawed or illegitimate, but that we should be aware of the selective and undue employment of them in this sensitive context in order to avoid moral corruption. His conclusion is that "it becomes even more necessary than usual to be vigilant about our own reasoning" (Gardiner, 2011b, p. 302), and that "our focus should be on understanding and resisting the temptation of various forms of buck-passing" (Gardiner, 2011b, p. 308). One more thing should be added: these denials are *revealing*; if it was not for the fact that we make certain assumptions about temporally and geographically distant others there would be no need to subsequently struggle to deny their ethical standing. In other words, these are attempts to deny what is taken for granted in activity.

If these arguments seem dissonant in the climate change debate, we must now think vigilantly about the assumptions actually made in future-oriented activities. As stated above it is not one set of assumptions that are common to all agents or all situations, but context matters. To begin with, a rough

sketch could be given of two different perspectives: the provincial and the cosmopolitan citizen. These types make different assumptions about their connection to future persons which reflect their different practical identities (cf., Korsgaard, 1996, pp. 83ff).[11]

Different roles amount to different obligations, or different reasons for acting. The provincial citizen sees herself/himself as a person with special ties to her/his immediate surroundings, while the cosmopolite may build his/her identity on being someone who is attuned to the world at large. In the same way the friend is particularly moved by her/his friend's request, the tribal member will feel stronger commitments to his/her fellow members just as the citizen of a society will towards her/his fellow countrymen, and the parent may disregard everything else upon hearing his/her baby cry. In identifying with a particular role we oblige ourselves to act in various ways.

What does this translate to in the present discussion? Two models seem possible (and will be further explored in the following section). The first would be to stitch together a patchwork of future-oriented obligations. People in the distant future may not figure prominently in the activities engaged in by the everyday individual, however, some connection to some future others may still be relevant and justify a degree of future-oriented concern. On such basis one could put together a kind of local cooperation model of intergenerational justice, where many individual obligations (owed to particular others) add up to something more generally owed to future generations. This might mean that sustainable development is not one problem, but rather a set of context-specific problems in incorporating future-oriented concerns into present activity. Different countries, groups of people and individuals struggle with different challenges; for some, the problem may be how to keep one's children alive until adulthood for elderly support, for some it may concern securing the harvest in an unpredictable climate, others may worry about ensuring a good education for their children or a better standard of living.

Alternatively, and more plausibly, one might think that it is the same problem, but that the solution is different depending on context. There might be a general formula behind these versions of the practical problem of development, for instance: how can we improve our lot without risking the future conditions for improvement? This second model may be expressed on the basis of the cosmopolitan identity, or on a shared and basic identity as rational human beings, or – if the first two alternatives stretch imagination too far – it may simply be thought of as being based on a commonly shared sense

[11]Naturally these practical identities are archetypes, not necessarily fully adopted by any real person. We might as well have looked at yet more specified identities too: that of a business man, a subsistence farmer, a member of a tribal society, a good friend, a parent, a conscientious policy-maker, etc..

of justice (as in like requirements for like cases). This general principle of development could be the recognition that its practice is only possible to the extent that it does not undermine itself. In this way the principle of successful development would be found in its very practice: to succeed in improving ones lot over time is to recognise various threats against that objective and to adjust the activity accordingly. It is of course not physically impossible to develop in a destructive and unreasonable way (the actual practice is evidence of that), but it may be practically impossible to aim for such failures of development. In other words, to make development sustainable on the basis of various future-oriented practical identities is to reject a threat against activities flowing from them, to make actions successful over time and in extension to maintain these identities. Add to this an ability to recognise this pattern as commonly shared, as a struggle for each and everyone in the process of planning or acting towards the future, that is, the thought of a shared destiny, and the conclusion generalises. The move from the concept to the conception can be put as follows: if the problem is that we cannot develop without risking the development of others, the solution is that we can. Put less paradoxically: development activities are made successful by first specifying and then preventing the various threats, or risks, which they inevitably give rise to (not only to the agent herself/himself, but to all who are subject to its effects).

We may then wonder which model is the correct, or most plausible, one in the present discussion. To adopt a perspective and try to model its implications means, as already asserted, moving from the concept of (i.e. problem of) intergenerational justice to its conception (i.e. solution), in the same way in which Rawls's conception of a citizen in a well-ordered society leads him towards his conception of justice.[12] We can thus conclude that in marking out the relevant difference between the practical problem to which intergenerational justice is the solution and the one to which intragenerational justice is the solution involves both the conception of the agent and the context. When Rawls in his later work discusses international justice it is noticeable that his conception of the contractor has a different set of interests reflecting its new role as the representative of peoples (more on this below).

[12]In fact, it may be remarked that Rawls stated an intention similar to the one we are after: "Since our account of justice as fairness begins with the idea that society is to be conceived as *a fair system of cooperation over time between generations*, we adopt a conception of the person to go with this idea" (emphasis added, Rawls, 2005 [1993], p. 18).

5.4 Intergenerational Climate Justice

It is now time to give a more distinctive theoretical costume to the conclusions of the previous section. My suggestion will be that we make use of Rawls's 'just savings principle' to that end. In section 5.2 we saw how Rawls seriously doubted the possibility of applying the difference principle intergenerationally, but we did not present his alternative suggestion. In section 5.3 it was argued that intergenerational justice is possible, and even necessary, once one adopts a practical outlook. We should now spell out in more detail what such an alternative would look like, and to this end we shall further scrutinise Rawls's just savings principle. The argument I will make is that we can vindicate a cosmopolitan just savings principle, structurally similar to Rawls's but with a wider scope that better fits the practical problem addressed. If that is correct there are still two general problems that must be answered. The first one concerns the status of this principle: is it a duty of justice or a duty of beneficence? Many writers on intergenerational justice have asserted that a necessary condition for the workings of intergenerational justice is reciprocity, as implicitly assumed in the circumstances of justice (cf., Gardiner, 2009; Gosseries, 2009). Since this is absent intergenerationally, they argue, we can at most justify a duty of beneficence, rather than the stronger duty of justice (Heyd, 2009). The second issue is the non-identity problem, it was said above that this must also be addressed by non-consequentialist accounts of intergenerational justice.

When the just savings principle is presented it is against the backdrop of the general conception of 'justice as fairness'. The idea is that this principle works as a constraint on the difference principle: the difference principle does not demand that all inequality is levelled out, and one reason for this is that it might prevent future justice. In the words of Rawls:

> [t]he appropriate expectation in applying the difference principle is that of the long-term prospects of the least favored extending over future generations. Each generation must not only preserve the gains of culture and civilization, and maintain intact those just institutions that have been established, but it must also put aside in each period of time a suitable amount of real capital accumulation (Rawls, 1971, p. 285).

The just savings principle thus is a way of determining an appropriate social minimum of the difference principle; its target is reached when an appropriate savings rate, which guarantees the same opportunities for future generations, has been established. In other words, inequalities acceptable according to the difference principle are constrained by the just savings principle, which

guarantees a reasonable social minimum for future generations and that the basic structure is maintained over time. The rate of savings will be dependent on the level of well-being of different generations; once just institutions have been firmly established it drops to zero, and a "society meets its duty of justice by maintaining just institutions and preserving their material base" (1971, p. 287). The result is a two-stage theory of social development – first savings, then maintenance – and once the second level is reached further development is optional.[13] In this sense the end is a kind of steady state theory, as many earlier philosophers and economists have proposed, such as Adam Smith (1981 [1776]), John Stuart Mill (1985 [1848]), John Maynard Keynes (1936), and in more recent times, Herman Daly (1974). The idea of the just savings principle may thus be thought of as sufficientarian, as we saw in Casal's reading of Rawls presented in the preceding chapter.

In the context of climate change a problem with Rawls's just savings principle is that it is assumed to work in the context of a closed society, whereas climate change is essentially trans-boundary. Take the example of a small northern country with sustainably just institutions, and accordingly no justice-based need to save for the future in addition to the mere obligation to maintain the basis of those just institutions. Given this background, "real saving (that is, net additions to real capital of all kinds) may fall to zero; and existing stock only needs to be maintained, or replaced, and nonrenewable resources carefully husbanded for future use as appropriate" (Rawls, 1999, p. 107). However, continued high-levels of greenhouse gas emissions are consistent with this, as long as this does not undermine the domestic institutional order. Even though climate change is global, its effects are locally differentiated: some countries may not incur substantial risk, and may even incur benefit, from moderate temperature increases. The fact that continued emissions may greatly threaten the conditions of existence for the future generations of other societies cannot be handled within the just savings principle on this understanding. In the context of climate change justice, this response is thus too parochial to be fully acceptable.[14]

[13]Frédéric Gaspart and Axel Gosseries have argued, on basis of Rawls's own assumptions, that it should not be optional. Instead he should have argued that both savings *and* dissavings are impermissible at this stage (2007).

[14]Clark Wolf has proposed an amended needs-principle to make Rawls's theory apt regarding the problem of climate change (2009). Parts of his presentation are interesting and constructive. For instance, he seems to make the following correct observation: "that anthropogenic climate change significantly increases the risk that many future people will be unable to meet their most basic needs" (Wolf, 2009, p. 348). But his proposal is still by and large unsatisfactory. His main idea, that we should amend a sufficientarian and generational-neutral needs-principle, is not properly vindicated, rather it is stated. Furthermore, it is not presented as an answer to a practical problem, but rather as a

This naturally takes us to Rawls's work on international justice, namely the "Law of Peoples" (1999). The Law of Peoples is an ideal international law meant to address the interactions between different peoples.[15] Just as with the domestic theory of justice, the Law of Peoples is vindicated from the original position – now in a different instance in which the parties are representatives of different peoples. The peoples represented here are assumed to have certain fundamental interests as free and equal peoples: they strive to protect their political independence, their free culture, their security, their territory, and the well-being of their citizens. Besides those interests, Rawls asserts another which is particularly interesting in the context: "people's proper self-respect of themselves as a people". "[T]his interests shows itself in a people's insisting on receiving from other peoples a proper respect and recognition of their equality", he explains (1999, p. 34). On these assumptions Rawls argues that the following set of principles will be forthcoming (1999, p. 37):

1. Peoples are free and independent, and their freedom and independence are to be respected by other peoples.
2. Peoples are to observe treaties and undertakings.
3. Peoples are equal and are parties to the agreements that bind them.
4. Peoples are to observe a duty of non-intervention.
5. Peoples have the right to self-defense but no right to instigate war for reasons other than self-defense.
6. Peoples are to honor human rights.
7. Peoples are to observe certain specified restrictions in the conduct of war.

theoretical possibility found in Rawls's position. The proposal is to pick up on something mentioned in passing by Rawls (2005 [1993], p. 7), namely to amend a basic needs principle if this is needed to guarantee the just background condition otherwise *assumed* for well-ordered societies. This quick mentioning of a needs-principle by Rawls is somewhat peculiar and intriguing. But what Wolf misses is that it is not neglected by Rawls: the whole idea of a just savings principle builds on the thought that what we assume for a well-ordered society may not be true of a society at all stages of development; sometimes we need to save just to be able to guarantee a just background condition. In that sense Wolf's discussion is almost redundant. Instead he should have pursued what Rawls did not, namely what happens when the development of a society threatens not only the basic needs of its own citizens but also those of other societies. This is the task picked up here.

[15] 'Peoples' is a technical term in Rawls's writings with a different meaning than 'states' or 'nations' (see, Rawls, 1999, pp. 23-30). The most important difference is that peoples, unlike states, have a 'moral character'.

8. Peoples have a duty to assist other peoples living under unfavorable conditions that prevent their having a just or decent political and social regime.

Granted that each representative of what Rawls calls "liberal" and "decent" peoples enters the second stage with the above specified interests, each party will likely want to make sure that no other peoples' actions substantially risk the future trajectory of its own peoples. Even peoples that know that they are well-situated in relation to the problems of climate change will see the reasonableness of the worries of others, as they would like to be treated with equal respect were the roles reversed. Certainly the peoples would also be concerned about their freedom and independence if these climate related worries were to be vented, especially since they seem to imply more far-reaching involvements in internal affairs than the other duties. Even so it would be unreasonable for peoples to treat their independence and freedom as overriding all other concerns; if the kind of development that other peoples pursue risks undermining the long-term development of all, the very foundation of the Law of Peoples is at stake. There might thus be an opening for an amended principle explicitly concerned with climate mitigation.[16] A natural way of spelling out this amendment from this perspective is through an international just savings principle. If so, one might imagine that the parties in the second, just as in the first, original position, "ask for themselves how much they would be willing to save at each stage of advance on the assumption that all other generations are to save at the same rate" (1971, p. 287). The difference from the domestic just savings principle is that they ask this as representatives of peoples rather than as citizens of a single society.

If we think of this international just savings principle as a conception of sustainable development it is natural to think of it as an extension of the local cooperation model presented above. Sustainable development is the outcome of reasonable negotiations between different nation states and is underwritten by a commitment to international cooperation over time. If climate change is a threat against the international society of peoples, they as a society will have a reason to combat it. This reason applies to the international society, and therefore to all representatives of the different peoples of which it is

[16]Robert Huseby pursues an interesting extension of Rawls's Law of Peoples in an unpublished paper that should be acknowledged (2009). He also presents an amendment to the existing principles, which is concerned with climate change mitigation. It is motivated by the "wish to extend the Society of People", and so suggested to be all-encompassing. It is not entirely clear to me, however, what form this amendment takes. As it stands it is rather unspecified: "just and decent peoples have an interest in undertaking, and a duty to undertake, the measures necessary to prevent such adverse effects from materializing." (2009, p. 11).

composed (even though it might not be a direct threat against their people). But is it a plausible way to think about intergenerational climate justice? There is something odd about this grounding of climate duties: it is as if our obligations regarding future individuals are owed to them only indirectly through our obligations to presently existing people.[17]

Let us thus present an alternative way of vindicating a just savings principle, one better tailored to its targeted problem. This has its basis in the conceptions of persons and of the situation that have been previously discussed. We assume that a reasonable person with access to basic knowledge about climate change will find a just savings principle with cosmopolitan-like scope reasonable. Or, phrased differently, a reasonable person will reject a principle of development, if this principle is premised on not everyone implicated by it being able to consent to it. If the principled way of development assumes that some of those affected by the development cannot accept it, then a reasonable person considering whether to accept this principle will not accept it either. The sustainability proviso, now presented as a cosmopolitan-like just savings principle, can thus be understood as a requirement of universalisability.[18] The principle upon which we act must be adoptable by all within the relevant domain. Additionally, in the attempt to determine whether a specific principle is universally adoptable, we must bear in mind the conceptions of persons and the situation. This last clause is what will make sustainable development different from Rawls's just savings principle. Unlike Rawls, we will not start off with the idealised conceptions of persons as free and equal, rather we will assume a plurality of less than ideally rational agents interacting in more or less dependent ways.

On a general level, since emissions of greenhouse gases contribute to climate change, which in turn will seriously harm and kill future individuals, no principled way of emitting greenhouse gases can be universally adopted.

[17]The subsequent chapter will address this international dimension of climate change in more depth. There I will argue that there might be residual responsibility (due to noncompliance) that must be addressed by the international community at any rate.

[18]There are some related ideas that should be distinguished here. First, the idea of generalisation. This is the idea that what is right/wrong for one person is right/wrong for any similar person in similar circumstances (cf., Singer, 1985). The "generalisation test" is: 'what if everyone did that?', which is a consequentialist way of checking the desirability of the consequences of generalising the pattern of the action you are considering. The universalisability test, in contrast, does not ask whether you actually will the generalised outcome of your action, but whether you *can* will that the principle of this action form a universal law (cf., Millgram, 2003, p. 527). In addition, there are two other "tests", similar to generalisability, that can distinguished: first, the "reversibility test", that is, 'what if someone were to do that to you?'; and the Golden Rule, that is, 'treat others as you would like them to treat you'.

However, neither can the rejection of such a principle be universally adopted, it seems, as greenhouse gas emissions are presently essential to our lives; a strict prohibition against further emissions may be unduly restrictive on some or cause some to be seriously harmed, and thus could be reasonably rejected. The dilemma-like situation may not have an optimal solution; perhaps we will be torn between the alternatives. But we could also think about cautious anticipatory steps in the right direction, and maybe there are some principles that can be rejected with more confidence than others. For instance, a principle that risks the agency or life of others for relatively trivial reasons of convenience or pleasure surely cannot be adopted as a universal law, it is not universally adoptable. We cannot rationally and freely will (or value) frivolous greenhouse gas generating activities given the kind of valuing creatures we are (or, more specifically, given the set of values or normative judgements we happen to hold). Before we further specify these climate-related intergenerational obligations, we could once again turn to the comparison with Rawls's approach.

The general thrust of the constructivist approach presented turns out to fit well with Rawls's considered view about the grounding of the just savings principle, expressed in *Political Liberalism* (2005 [1993]). In section 5.2 we saw how Rawls struggled to find an appropriate vindication of a principle of intergenerational justice. On the general assembly and the present time of entry-interpretation alike, the problem of the first generation led towards the negative conclusion of no mandatory savings (other than what follows from the natural duty of care for ones offspring). The solution to this practical problem is now found in the problem itself, in constraints placed upon reasoning: "the parties are to agree to a savings principle subject to the condition that *they must want all previous generations to have followed it*" (emphasis added, Rawls, 2001, p. 160; cf., Rawls, 2005 [1993], p. 274). As was stated in section 5.2, the parties of the original position must choose a principle of savings not only for themselves but in effect for all generations. When we add that this principle must have the form of a law we see that the conclusion is forthcoming. But what about the above mentioned dominance of the 'no savings' (irrespective of what previous generations have done) strategy? Put in this context, where the representatives must universalise their choice, it is no longer likely that this will result. Can they will as a universal law that no generation saves for another? Probably not. What if they worry about being the first, least fortunate, generation? That might still be a problem, but it is mitigated now by giving a principled reason for any exemption. The representatives are asked to choose a savings rate on the basis of no information about which generation they are part of. In the universalisability interpretation of this situation, the principle of savings is thus guaranteed

to have the form of a universal law: it cannot make exceptions that exploit temporal asymmetries or arbitrarily benefit one generation over another. However, the universal form of the principle does not mean that it must be insensitive to context-specific features intergenerationally; it might very well be possible to exempt some generations from the mandatory savings if they are sufficiently worse off. The principle might, for instance, be the following: any generation that has sufficient resources for everyone to have their basic needs met presently must otherwise use resources in a way that leaves enough for the provision of the basic needs of people of all the subsequent generations. What is ruled out by universalisability is merely – though it is not such a small thing – the exploitation of one's temporal position to secure non-basic benefits at the expense of risking the basic needs of others. Universalisability is a basic constraint on the deliberative process of trying to find a reasonable way of acting; it is obviously included in the model of 'justice as fairness' intragenerationally, and now Rawls reminds us that it is equally necessary intergenerationally. Thus, an action based on a principle that predictably harms or kills some cannot be adopted as a universal law even if it benefits others or maximises total utility. This basis of the principle of just savings, presented in Rawls's later work is, as I see it, by and large correct. The only problem is its scope, which is set by relatively arbitrary assumptions rather than being determined by the constructivist approach itself, as has been recommended here.

The cosmopolitan interpretation of the just savings principle presented here as the basis of climate justice is in some respects different from the one Rawls talked about. It demands that a society save for the future not only of its own citizens but of all those affected by the development of this society. It justifies this priority by the practice of development: in order to successfully develop over time a society needs to attend to its negative externalities (to use an economic term) too. The main difference from the "patchwork model" is that these obligations of savings are not tied to the limits of care. It may well be the case that despite the fact that a society displays little or no concern for the future well-being of its own or other societies, it is still obliged to reorient those of its activities which create an unreasonable risk for future people. That being said, care and beneficence can of course still play a role as a motivation for voluntary and additional savings (under the condition that they do not come into conflict with other intragenerational requirements).

In concluding this defence of my version of the just savings principle in the climate context, it might help to describe its status as something similar to an imperfect (rather than perfect) duty in the Kantian terminology. The normative reasons presented in favour of this principle or duty may be said to be related to, what Kant referred to as, a "contradiction in will" rather

than a "contradiction in conception". What does this mean more specifically? The distinction between perfect and imperfect duties from Kant is elusive and hard to specify. Most generally, a perfect duty is "one which allows no exception in the interests of inclination", and an imperfect duty, by contrast, one which does allow for that; an imperfect duty "leaves a play-room (*latitudo*) for free choice in following (observing) the law". Thomas Hill Jr. argues, after quoting these passages from Kant, that they "suggest that principles of imperfect duty can be expressed in the form 'One ought to do (or avoid) x sometimes, to some extent' whereas principles of perfect duty must be expressed in the form 'One ought always (or never) to do x' " (Hill, 1971, p. 56). Another way to describe the difference is that a perfect duty prescribes an (omission/commission of an) action whereas an imperfect duty prescribes a maxim of ends; an example of the former kind is thus 'not to lie', and of the latter kind 'to help others in need'. In this way perfect duties are determinate, there is no latitude for choice, whereas imperfect duties have the form of a general principle that must be determined and specified by moral judgement and leave room for choosing by which specific actions it should be discharged. That said, it is not the case that imperfect duties are optional. For instance, in order to discharge your duty of beneficence it is not enough to adopt it as a general principle but never act in accordance with it; even if it is not a demand to always help others you must do so sometimes. It should also be pointed out that the imperfect/perfect distinction does not fully correspond to the distinction between positive/negative duties; that is there might be an imperfect duty to omit to perform an act and conversely a perfect duty to commit to perform an act (Hill, 1971, pp. 64f). Yet another, partly overlapping, distinction from Kant is that between "ethical duties" and "juridical duties", where the latter is a sub-category of the former in which the duties have correlative (enforceable) rights.[19]

Now the just savings principle defended above, I believe, should be thought of as a two-folded imperfect duty you have as a citizen, specified as follows: a (negative) duty not to support a system of activities that creates unacceptable risks for future people, and a complementary (positive) duty to work towards the creation of a better functioning alternative system. It does not prescribe any specific actions but rather a general maxim, and is thus plausibly described as an imperfect duty. There is latitude for choosing a convenient and suitable way of enacting this duty. It is not clear that there are corresponding rights attached to these duties, and at any rate they do not rest on any reciprocal

[19]It is not uncommon to run the distinctions between perfect/imperfect and duties with corresponding rights/duties without corresponding rights together, see e.g. Shue (1988, p. 688).

contractual idea. Some take such admissions to mean that the duty cannot be one of justice. Rawls for instance remarked:

> It is a natural fact that generations are spread out in time and actual exchanges between them take place only in one direction. We can do something for posterity but it can do nothing for us. The situation is unalterable, and so the question of justice does not arise (Rawls, 1971, p. 291).

Similarly, David Heyd argues in his interpretation of the just savings principle that "what remains of the duty of 'just savings' is not a principle of justice but only a statement about the value of justice and the duty to maintain or promote it" (Heyd, 2009, p. 170). It is not uncommon to take such a concession to weaken the claim, to see beneficence-based claims, and similarly imperfect duties, as less important than justice-based claims and perfect duties. Brian Barry, for instance, contends that claims based on justice as opposed to considerations of humanity are regarded as having a higher priority and seen as more pressing (Barry, 1978). Another common assumption is that only perfect (and/or negative) duties are enforceable. However, such concerns are by and large based on intuitions rather than arguments. When the category of imperfect duties is closer studied, we see that there is room for enforceability. As Allen Buchanan notes, the best argument against the assumption that only perfect, or justice-based duties with correlative rights, are enforceable

> rests on the recognition that enforcement is sometimes necessary to secure contribution to *collective goods*, that in some cases, at least when the collective good in question is extremely important, such enforcement seems morally justified, and that its being justified does not appear to depend upon any assumption that the individuals in question have a moral right to the good in question (1987, p. 562).

The context and argument proposed here is of course exactly of this kind: given that a relatively stable climate is of vital importance for the well-being of future people, it is reasonable to enforce the duty of a just savings principle (although it does not specify obligations owed to particular future persons). Thus, given that the duty here vindicated is no less strict than a duty of justice, this concession seems to be of little importance.

5.5 Further Specification and Defence

In this chapter I have argued for a theory of intergenerational climate justice. Put simply, the argument was that in the role of a citizen of a present day greenhouse gas generating society, one has reasons to make sure that one's activities do not give rise to unacceptable risks to future people. This obligation was further specified through a discussion of Rawls's just savings principle, with the following result: your duty is (to do your share of) making sure that enough resources, in the sense of sufficiently many to provide for basic needs, are available to those future people implicated by your society's development activities. In the climate context the talk about savings is most naturally understood in terms of abating climate change; to save for the future is best done by preventing or mitigating the problem of climate change, monetary savings for future adaptation to the effects of the problem comes second. In fact, on basis of the argument that was made above, we could even more strongly argue that climate change abatement is the *only* way of meeting this duty. To attempt to discharge the duty through general savings – or even worse, to rely on economic growth as a kind of savings – is to fail to appreciate the kind of assumptions we talked about above, in particular the plurality and finitude of those we relate to through greenhouse gas emissions. Even if future people were to turn out better off on average than present people, this of course is not true of each future individual; such an assumption accordingly is a questionable idealisation. Further, based on what was said above about the status of this duty being imperfect, it is likely that the best way for a nation state to discharge this duty is to work towards the creation of an institutional framework which results in activities that do not have such detrimental side-effects; in other words, to work towards replacing our present day carbon-intensive economy with a less destructive alternative. I will get back to the more concrete specification of this intergenerational duty in the final chapter of this thesis. Let me now just finally address two remaining worries: first, whether the duty implies too many or too few savings, and, second, whether it makes sense in light of the non-identity problem.

First, the too much or too little-objection. We can address this through two specific expressions of it. The first, presented by Axel Gosseries, is directly aimed at the Brundtland conception of sustainable development, and the second, presented by Stephen Gardiner, more generally at an international just savings principle. Gosseries argues that the needs principle is an insufficient basis for a theory of intergenerational justice. More specifically, he argues, it "falls short for two reasons of what luck egalitarians believe would be the right view of intergenerational justice" (Gosseries, 2005, p. 45). As is thus evident, it is an external critique; the needs principle is counter to the intuitions

shared by so-called "luck-egalitarians". Luck-egalitarianism, as opposed to the sufficientarian needs-principle, holds that any non-optional misfortune should be levelled out; any difference between people that is not the result of free choices is undeserved and should be compensated for. Against this background, it is not enough to make sure that future generations have enough resources to provide for their basic needs as there may be other inequalities between people of different generations that should be levelled out; this is the claim of too many dissavings. So maybe the sufficientarian principle mandates insufficient savings. But it can also be accused of allowing for (even if not requiring) too many savings. In principle the present generation may put aside as many resources as it wishes as long as in so doing it does not risk present basic needs provision. From the point of view of luck-egalitarianism, however, this should not be allowed for. According to this theory the prohibition on savings must be much stricter; as long as there are circumstantial misfortunes presently it is not optional to consider these. Before we answer this challenge we should consider Gardiner's somewhat similar charge (although it is levelled at another target).

Gardiner argues that an international just savings principle would be permissive of insufficient savings. Although he finds some merits with the principle, he is generally sceptical:

> First, the principle appears to introduce too strong a *status quo* bias. For example, it appears to rule out a one-generation decline in capital made for the sake of a large longer-term gain, even if overall the society always remains well above the threshold necessary for just institutions. [Exemplified as follows:] Why cannot we – as a matter of intergenerational justice – require 21st-century Americans to consume less than late 20th-century Americans? If the justice of their basic institutions would not be threatened, and if this drop in consumption were essential to solving the climate problem, why would demanding it be unjust? (2011a, p. 145).

What then should be said about these objections? First, I should say that even if they are not targeted against the specific version of the just savings principle that I proposed above, they are potentially problematic for it and must be responded to. We will, however, see that they are not a serious threat to the idea defended and do not force us to revise anything of what has been argued for. When it comes to Gosseries's dual critique, I believe that it is the first (the 'too many dissavings') charge that is the only real challenge, the second part (the 'too many savings'-objection) is based on an uncharitable reading; obviously the intergenerational principle of justice in the Brundtland conception is not to be thought of as the first and only principle of justice,

but just like Rawls's just savings principle it must be fitted into a broader theoretical framework along with other concerns. In other words, there might very well be unjust intergenerational savings even if they do not presently violate basic needs, the only claim made here is that *if they do* then they are clearly unjust. As for the second part of Gosseries's critique my, somewhat tedious, answer is to point to the tentative as well as practical nature of the intergenerational theory here proposed. The proposal defended in this chapter is to be seen as a first step in the right direction, not as the final words in the intragenerational versus intergenerational climate justice debate. In the final chapter I will get back to this idea, and we shall then also suggest a more exciting response, namely questioning whether there are any practical differences between Gosseries's luck-egalitarianism and sufficientarianism in the climate context. When it comes to Gardiner critique I think we must argue that it is built on a misunderstanding of the principle of just savings, or at least it is a critique of a different principle than the one I have defended here. The specifics of a just savings principle need to be worked out empirically, where either savings or dissavings may result depending on the status of the problem. There is nothing that prevents a temporal drop in consumption from being what is required, if that is necessary to avoid serious problems being passed to future generations.

Finally then we should get back to the non-identity problem talked about in section 5.2. Is the non-identity problem something that we should be concerned about in theorising about intergenerational climate justice and in trying to justify a sustainable development? Based on the position presented above the non-identity problem would take the following form:

> **The Non-Identity Problem of Climate Risks:** you argue that we have reasons to prevent or mitigate the climate impact of our present-day activities as that will lead to an unacceptable risk to future people's basic needs. But in what sense are the risks that our activities give rise to 'unacceptable'? If it is the case that the choices we make today, the kind of activities engaged in, are a necessary condition for the identities of those future people, will they not find the accompanying risks acceptable after all? It is thanks to the combustion of fossil fuel and deforestation today that they will live in the future at all. Sure, if we shifted to some alternative system we would prevent climate change, but then we would also have brought about some different set of, non-identical, people.

Does this make the position here defended implausible/less plausible? I believe not. We can reasonably affirm, what Parfit calls, "the No-Difference View", i.e. the view that the non-identity problem is of no moral difference.

Here is why. First remember the non-comparative model of harm, argued for in chapter three, which underlies the reasons to act with respect to the basic needs of future people. If we were to defend the No-Difference View on the basis of a comparative model of harm, we would have to give up the person-affecting restriction and compare states of affairs with the same number of people but with different identities in terms of levels of well-being. That is, we would have to argue that the choice in a "non-identity situation" is wrong because it is worse that those who live as a result of that choice are worse off than those who would have lived had we done otherwise (what Parfit calls "The Same Number Quality Claim" or "Q" (1984, p. 74)). The sufficientarian alternative is similar to Parfit's response in one sense, but different in another important sense. The choice in a non-identity situation is not argued to be unjust (or bad) on account of it being worse for any particular person (in that sense it is similar), but neither because it is worse than an alternative. Instead we argue that we have a reason to avoid climate change (or the 14-year old girl has a reason to delay her pregnancy, or the community has a reason not to choose the risky policy, etc.) because it produces an outcome in which any (though not necessarily all) particular future person will be badly off (or run an unacceptably high risk of being badly off). The sufficientarian solution naturally follows from the reliance on a non-comparative notion of harm: although these future people may not be comparatively worse off, they are in a non-comparatively bad state of affairs as they fall behind a norm of a sufficiently good life (cf., Meyer and Roser, 2009). This response is available to constructivists and contractualists alike (Reiman, 2007; Heyward, 2008; Kumar, 2009).[20] Basically, the argument is that the particular (token) identities of future persons are not morally relevant in the justification of future-oriented (climate) concern; in the Rawlsian terminology, the reason can be explained by the fact that in the original position future persons are not represented as particular persons but as parties.

The reasons to do something about climate change are thus not directly generated from concrete and particular individual future persons, rather they are based on the thought that unmitigated climate change is an unacceptable outcome once we adopt the point of view of any person severely affected by climate change in the future. Phrased differently, climate change is an outcome that is not universally acceptable. Whether concrete and particular victims of climate change actually would waive any such concern on finding out that they would not have existed at all but for climate change is morally irrelevant in this justification here and now. To claim that it would be a

[20]The following response is particularly influenced by the reasoning of Jeffrey Reiman in his (2007).

relevant ground to dismiss climate change abatement would, again, be to make highly questionable assumptions that exploit the extremely weak (or non-existent) choice situation of future persons. Once they exist there will naturally be reasons in relation to their particular identity, but as of this moment in reflecting about their future interests, their particular identities should reasonably be abstracted away.

5.6 Conclusion

In this chapter I have presented a theory of intergenerational climate justice built on the concept of sustainable development. The main argument was that the inherent obstacles of the intergenerational setting should lead us to a different theory than for the intragenerational ditto. It is not possible to straight off extend existing intragenerational theories of justice to this new context. As the questions raised and assumptions made in actions with a bearing on future people are different from those affecting only present people, we must revise our overall theory of responsibility too. I argued that we should begin such a project in a radically practical way by thinking about the actual, openly expressed or tacitly embraced, assumptions in future-oriented activities. In so doing, we will come to the conclusion that, generally, activities that give rise to greenhouse gas emissions are unjust when they create frivolous benefits to us at the expense of seriously threatening the provision of the basic needs of future people. This duty was further explicated through a discussion of Rawls's just savings principle. I argued that we may revise this principle in accordance with the relevant information about the new context. In particular, we should give up its restricted domestic scope: what is relevant in determining climate-related duties is the kind of connection assumed in greenhouse gas generating activities, and as climate change is essentially transboundary this will lead to a cosmopolitan-like extension. In the last section of this chapter I defended the theory against two possible objections. The first was the charge that it would lead to either too few or too many savings, and the second was the non-identity problem.

This concludes the defence of what could be thought of as an ideal theory of climate justice. It is ideal in the sense that I have not considered any instances of noncompliance (even if not ideal in any other sense of the word). In the following chapter we will pick up that task. There we will move to the nonideal side of the matter: what happens when others do not act even though they have reasons to or in cases of historical irresponsibility?

Chapter 6

International Climate Justice

> The Earth is one but the world is not. We all depend on one biosphere for sustaining our lives. Yet each community, each country, strives for survival and prosperity with little regard for its impact on others. Some consume the Earth's resources at a rate that would leave little for future generations. Others, many more in number, consume far too little and live with the prospects of hunger, squalor, disease, and early death.
>
> — *Our Common Future*, (1987, p. 27)

6.1 Introduction

The preceding chapter was about intergenerational climate justice. There it was argued that a just savings principle with cosmopolitan scope can be generated on the basis of a critical and practical reflection on existing development practices. This principle applies to all agents that engage in future-oriented development activities, which in practice means that it is valid for any, developed or developing, nation state. However it need not be insensitive to the specificities of particular agents, there might even be cases where the principle requires no savings at all. Generally, however, we assume that all agents will comply with this principle and that climate change is thus mitigated. Now even if this may be a reasonable assumption it is of course true that noncompliance with this principle is the default position to date. In this chapter we will pose a question in relation to the state of noncompliance, a question in nonideal theory. The question is the following: what additional and/or residual duties are there in relation to the problem of climate change as a result of noncompliance; that is, in what way should the distribution of rights/duties be influenced by the fact that historical and present actors have

not done what they have reasons to do? This topic is not essentially different from the one discussed in the preceding chapter; some of the views discussed here could be seen as proper answers to the same intergenerational problem we introduced in the preceding chapter. However, in the critical discussion of these alternative views we shall focus on the question of how noncompliance is handled. If the cautious view defended in the preceding chapter, unlike these competing views, can successfully answer this question – and this is exactly what I will argue – then it will stand out as a promising point of departure.

We know from the preceding chapter that greenhouse gas emissions give rise to an intergenerational problem: earlier generations (including the present) enjoy the benefits of activities which have greenhouse gases as a by-product, leaving massive costs for later generations. Due to this state of affairs most relevant actors recognise strong reasons to set a cap on such emissions. At the international meeting in Rio de Janeiro, in 1992, where the United Nations Framework Convention on Climate Change (UNFCCC) was adopted, these reasons were formalised as follows: "The ultimate objective of this Convention [...] is to achieve [...] stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (Article 2)[1]. Once this ambition is accepted another problem emerges though: how should this stabilisation be achieved in a *just* and *efficient* way? Little guidance is provided by UNFCCC other than that "the parties should protect the climate system [...] on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities" (Article 3.1).

This is a call for international and/or global climate justice.[2] We accept that the present generation should do something to remedy the problem of climate change, and now ask how this task should be fairly divided among the relevant actors. One would have thought that the question of climate justice was set after the arguments made in the preceding chapter, that once the version of the just savings principle was adopted it would simply be a matter for relevant actors to refrain from further emissions in the most efficient way

[1] Accessed online: http://unfccc.int/key_documents/the_convention/items/2853.php, 2012-08-06.

[2] There is a clear difference between what can be called 'international justice' and 'global justice' (or 'cosmopolitan justice'). The former takes nation-states to be the moral actors (see Page, 2006; Miller, 2008), whereas the latter takes individuals to have that role (see Harris, 2010). For the purpose of this chapter, there is no need to make a decisive decision between the two, but for reasons of simplicity and because UNFCCC also makes this assumption, the proceeding discussion will be based on international rather than global justice.

possible. But that would be a mistake. Even if all relevant actors accepted the justifiability of the principle of intergenerational climate justice it could be the case – and, in fact, this is the case – that not everyone would honour and act on it. As was further discussed in chapter four, the climate context is one in which noncompliance is to be expected.

The challenge, which gives rise to the need for theorising about international justice, comes from the fact that even if the emissions of greenhouse gases have very damaging long-term effects, they are the result of a greatly desirable search for progress of human societies and humanity as a whole. The industrial revolution has allowed societies to prosper as a result of the use of fossil fuel energy in the form of coal and oil, advanced agriculture (with methane as a by-product), and land-use change due to deforestation. During the time in which greenhouse gas emissions have accumulated in the atmosphere, many people have greatly benefited: they have gone from starving to well-fed and seen constantly higher standards of living. If we now are obliged to find other means of arriving at these positive development trends, ways that do not amount to climate change as a negative side-effect, this is potentially upsetting in different ways. First, it might mean that the so-called "developing" world will not be able to pursue economic development and poverty eradication in the same way, to the same extent, or with the same ease as the already "developed" world did. Second, it might amount to disruptive changes for the world as a whole: new technology is needed, production and consumption patterns may need to shift in character, and different perceptions of responsibility emerge. Third, because of historical investments in what we can call a carbon economy, there are issues of "lock-in", path dependency and reasonable expectations based on these. Thus, once we decide to embark on a more responsible development path, risks of indirect injustices arise and need to be dealt with.

The focus on the international distribution of climate change burdens does not assume that the intergenerational is settled. The inter- and intragenerational questions are closely intertwined (Gardiner, 2011b; Caney, 2012). For example, if the burden assumed by the present generation cannot be distributed within this generation in *any* acceptable way, it may indicate that the intergenerational burden is too demanding; and, conversely, we cannot make up a distribution of burdens and benefits here-and-now without paying attention to the environmental impact it has over time. In other words, neither intragenerational nor intergenerational justice can be pursued in isolation.

An adjacent presumption is that climate justice cannot be isolated from justice more generally. Simon Caney has argued that we should adopt a "method of integration" rather than a "method of isolation" in our climate

justice theorising. That is, we should consider questions about global and intergenerational justice in general (e.g., trade, development, poverty) in conjunction with the distribution of climate responsibility (Caney, 2012). Caney's idea is important, and the question raised by it cannot be fully dealt with here. What will be done in this chapter, though, is to partially integrate the climate question with wider concerns. I will argue that if a principle of climate justice presents an insurmountable hindrance against the provision of basic needs presently, there are decisive reasons to dismiss this proposal. It is never the case that climate justice should be pushed through at the expense of the agency of some affected persons. The integrative approach will, however, be confined to this extension. Unlike what seems to be Caney's idea, I will not assume that we must fully resolve other questions of international/cosmopolitan justice in order to convincingly make a case for climate change action. In fact, I will to the contrary assume that the tentative and cautious steps proposed on basis of the concept of sustainable development deliberately refrain from trying to resolve such tensions, with the purpose of generating practicable principles fit to the context.

The guiding idea of this thesis, the concept of sustainable development, narrows the scope of the international dimension of climate justice. Basically the only explicit requirement we put on the distributive question is that the burdens of climate change abatement should be distributed in a way that respects the basic needs of the present generation. There is, however, at least one implicit requirement that is no less important in the evaluation of different principles of climate justice, namely feasibility. If basic needs indeed should be given overriding priority, we must make sure that they *can* be provided for, that our claims to be able to do so are not empty rhetoric. The distribution proposed must be feasible in other words.

As was already touched upon in chapter one, feasibility is a tricky notion. Most often feasibility is used to refer to the existing possibilities of implementing a political proposal here-and-now; if there is enough resistance (say, that a majority cannot be formed in favour of the proposal) the proposal is thought to be infeasible. It is, however, the alternative, the normative sense of feasibility that is most important in the following discussion. That is, feasibility as a necessary condition on the practical implementation of normative proposals. In this sense a proposal is feasible if it can be reasonably agreed upon and adopted by reasonable moral agents. If a principle can be reasonably rejected by some of the relevant actors it cannot be the basis for regulating actions of this group of agents (cf., Scanlon, 1998). This sense of feasibility is not dictated by actual resistance but rather by the practical possibilities extended to their limits. Let us stick to the terms proposed in

chapter one, even though they may not be optimal[3], and call the first sense feasibility (actual) and the second feasibility (normative). Their relation is the following: a proposal may be feasible (normative) even if it is not feasible (actual), which happens in cases where the conditions of reasoning are not conducive to an ideal deliberation. The reverse could also hold: a proposal can be feasible (actual) even though it is not feasible (normative), as in cases where an unreasonable agreement is reached. In the first kind of case existing resistance prevents the possibility of agreement. In the second kind of case it is rather the lack of resistance that creates a problem: as disagreement is concealed behind the appearance of agreement proposals on such basis are unstable over time. When assessing the feasibility of various normative proposals, it is not primarily the actual opposition or the distance between the normative ideal and the actual practice that are relevant. A proposal is infeasible in an interesting way here if it can be reasonably rejected in a practical deliberation conducted by a reasonable agent. Feasibility (in the dual sense) is important not only as a practical or political requirement, but also on moral and normative grounds: no matter how just a distribution is, if it cannot materialise or if its existence over time is unstable then it is of little value. Furthermore, such infeasible proposals may block possible moves towards an order that is more just than status quo.

In section 6.4, I will propose an eclectic approach to international climate justice that builds on the idea of a realistic utopia. The hypothesis is that the debate about international climate justice is polarised in the following way: some proposals are unanchored utopias; others make seemingly feasible, but unjust, proposals. In order to construct a sustainable development, stably just development paths for differently situated societies worldwide, we must strike a better balance between ideals and realities in a realistic utopia.

Let us exemplify the idea with two persons, call them 'Utopia' and 'Conservative', who share the ownership of a chemical factory. The factory emits hazardous fumes that intoxicate a nearby village. To avoid this problem, the owners need to make a costly investment in a new particle separator at the cost of 100. Reasonably they should share this cost somehow. Utopia proposes that they split the bill in two equal parts so that each pays 50, whereas Conservative does not accept that. Conservative instead proposes to pay 25% of the costs, leaving 75% to Utopia, but also expresses a willingness

[3]Admittedly, it is somewhat confusing to speak about a normative sense of feasibility, especially since the common usage of the term is to signal actual political willingness. The reason why I still prefer this strained use is because I want to talk about different kinds of possibilities for action. As was mentioned in chapter one, on basis of the 'ought implies can'-principle, the 'can' is the subject of an interesting discussion. An alternative to the talk about feasibility (normative) would perhaps be talk about legitimacy.

to raise his share in a compromise (though never as high as to 50%). A just distribution of the costs could now be understood in four ways: first, from Utopia's perspective, each paying 50%; second, from Conservative's perspective, 25%/75%; third, taking the bids as they are (the utopian 50% plus the conservative 25%); fourth, from a negotiating position, extending the practical possibilities to their limits (say, Utopia 60% per cent and Conservative 40%). Now it may seem that the first proposal is the most just of the three (at least *pro tanto*), but given the actual conditions, insistence on the first proposal will likely result in the third and thus a failure to make the investment. Utopia's proposal would ideally be most just, since it would solve the original poisoning problem in the fairest way, but in practical terms it would not be preferable to the third proposal as the outcome would be equivalent. Both the first and third proposal would allow the waste problem to continue (and that injustice to be perpetuated). In light of this background: is it unfair to ask Utopia to do more than s/he ideally ought to do in order to get Conservative to increase her/his contribution and avoid the collective action problem? Should Utopia reasonably extend the offer to 60%, or even 75%?[4]

I will argue that most proposals in the debate can be understood as either too utopian or too conservative. In section 6.3.1, we will look more closely at ideas that fall into the former category. In particular, I will assess the idea of historical responsibility for the developed world. The argument in essence is that such a principle is not feasible as it may be reasonably rejected. Furthermore, if this is the case, then the utopian position is not innocent as it allows the initial intergenerational problem to be perpetuated. In section 6.3.2, we move on to proposals allegedly taking feasibility seriously. These are ideas about a distribution in accordance with equal per capita emission rights (coupled with an emission trading scheme) and equal burdensomeness. On a general level, the argument against this category of principles is that they, contrary to what is claimed, misunderstand feasibility: it is not dictated by what actually happens, rather by the extension of the practical limits. This mistake makes these proposals less just than relevant actors have reasons to demand of climate justice. If this is the case, then another implication may be that these proposals even fail on their own terms: contrary to what is claimed, they are not feasible either, as some parties have legitimate complaints against them. Beside these overarching problems, more specific issues that can be raised against each of the existing proposals will also be

[4]What happens in the event that no compromise can succeed in raising the bids enough to complete the investment? The possibility of there being no feasible (climate) deal whatsoever of course exists. But for the relatively modest demand to respect the basic needs of future generations, this seems too pessimistic.

presented. In section 6.4, we will then draw some conclusions from the failures of many existing proposals in the international climate justice debate. The argument is that even if none of the proposals alone give a reliable ground for the priorities of a sustainable development, they all contain important considerations. What we should do, given that we want to build on a sustainable development, is to pick and choose from all of the proposals. In this way we can begin to approximate an ideal climate justice where the priorities of sustainable development form the groundwork. In the final instance, I will argue, sustainable development can help us detect some dead ends in this debate by ruling out some unreasonable proposals. It might not give us a perfect climate justice, but that is not to be expected anyhow.

6.2 Two Frameworks for Climate Justice

Before we begin to assess the principles of international climate justice, the problem must be further specified. There are (at least[5]) two ways of talking about the problem that international climate justice should be the answer to. The first presents the challenge as a "commons problem" and the second as the distribution of the benefits and burdens of climate change abatement. The choice between these frameworks may influence which considerations are thought of as relevant in answering the normative problems of distribution.

According to the first perspective, we should think of the atmosphere as a global commons because of its ability to absorb greenhouse gases. When such gases are emitted they utilise the absorptive capacity of the atmosphere in the same way as farming a piece of land depletes its arable properties. This analysis builds on what is known as the "tragedy of the commons", first presented by Garrett Hardin (1968), and is usually understood as follows. A group of herdsmen share a commons. Each herdsman wants to maximise his/her profits and thus considers whether to add a grazing animal. Adding an animal creates a benefit to the individual, but also a collective cost in terms of an increased load on the land. The share of the collective cost covered by the individual does not exceed the benefit s/he enjoys from adding another animal. Thus, each herdsman faces an incentive structure where it is rational for him or her to add another animal. As each of the herdsmen

[5]Henry Shue has argued that there are four different questions of justice in relation to climate change: "(1) What is a fair allocation of the costs of preventing global warming that is still avoidable? (2) What is a fair allocation of the costs of coping with the social consequences of the global warming that will not in fact be avoided? (3) What background allocation of wealth would allow international bargaining, about issues like (1) and (2), to be a fair process? (4) What is a fair allocation of emissions of greenhouse gases (over the long-term and during the transition to the long-term allocation)?" (2010 [1993], p. 201).

adds animals to the land it will tragically deteriorate to the disadvantage of all. The explanation of the development is the following. First, no matter what the others do, it is best for each to add another animal (if all others add animals, s/he would be a fool not to do so too; if the others instead refrain from adding animals s/he might free-ride on their collective decision by continuing to add animals). Second, each individual decision is a marginal one; the herdsman considers whether to add another animal, then whether to add another one, and so on (cf., Gardiner, 2011b, pp. 108-14). More basically, it is the non-excludability and rivalry features of a commons that give rise to the problem (Bovens, 2010, pp. 8f). A commons cannot be fenced off by some to prevent others from (ab)using it (non-excludability), and the profitability of the resource creates a competition between the different parties (rivalry). The atmosphere satisfies both these conditions. There is no way in which some agents could prevent others from using the absorptive capacity of the atmosphere, and the possibility to freely emit greenhouse gas emissions is highly beneficial for each emitter.

The advantage of the commons metaphor is that it illuminates some characteristics of the problem. For instance, it highlights the fact that it is a coordination problem where there is a discrepancy between what is individually rational and collectively rational to do. The analogy to climate justice is the following. It is individually rational for each actor to continue to emit greenhouse gases irrespective of what others do, but at the same time it is collectively rational for all to limit their emissions. Because of the characteristics of the atmospheric global commons, climate change is the natural, however tragic, development of the individual pursuit of greenhouse gas-generating activities. The argument then proceeds: since we have realised that this function of the atmosphere is extended to its limits and that continued overuse will result in dangerous climate change, we are obliged to find the means to keep it sustainable. The idea is basically that we should close the atmospheric commons – or that this should be done retrospectively from some earlier date and rectified accordingly – and find some acceptable means of regulating its further usage. The rights of use under the closed atmospheric commons may be more or less fair. It is possible to argue that all we need to do is to close the commons, without any redistribution at all, but such a proposal is unlikely to be acceptable. The question is thus who should be allowed to emit how much greenhouse gas and who, if any, should compensate whom for their denial of further emissions.

The second perspective, i.e. distributing the burdens of climate change abatement, has the advantage of more directly addressing the problem. Here it is the costs of "solving the problem", i.e. avoiding dangerous climate change, which are central. We know that the current levels of greenhouse gas emissions

are unsustainable, and thus need to shift away from the practices that have these effects, but to do so is costly; today much of the world economy is based on fossil fuel and massive investments are made in accordance with this. Whether we should now promote renewable energy, nuclear power, alternative consumption or energy efficiency, it will be costly in both pure economic terms and in effort. Since we cannot expect to prevent all risks of climate change, we also need to account for the costs of adapting to climate change. These costs are not fairly distributed by chance: some of the least developed countries (with the lowest GDP) will face the most burdensome load, in part because they are geographically placed at vulnerable locations (e.g. exposed to drought) and in part because of their lack of economic capacity. Finally, it is also possible that financial resources devoted to climate change abatement are taken away from some other projects – e.g. financed from the existing foreign aid budget – such that suffering or harm is implied. Indeed, any financing of climate change abatement will have an opportunity cost that must be accounted for. It seems that we thus need some principled way of distributing these costs.

Does it matter which perspective we choose? Some have argued that it does, since the choice will rule out certain of the considerations at hand. Paul Baer, for instance, argues that:

> "focusing on the burdens of reductions obscures the question of who has been responsible for, and benefited from, the overuse of the atmosphere. Assessing responsibility requires us to focus on the atmospheric carbon sink as an economic resource, and to account for both its unequal appropriation in the past and its unequal use today" (Baer, 2002, p. 395).

There might be something to this thought that the choice of a framing to the problem of international climate justice makes one or another answer more plausible. The two perspectives seem to give two different focal points. On the commons-framework it is natural to focus on who has a right to emit, whereas on the burdens-framework it is more relevant to ask who has an obligation not to emit. We will also see that some of the principles of distribution discussed above have been framed in one rather than in the other perspective. All the positions considered agree on there being weighty reasons to prevent dangerous climate change. What distinguishes them can be inferred from their focus when solutions are presented. Some are primarily worried about grounding duties/responsibility to make solutions to the intergenerational problem effective, whereas others are primarily worried about grounding rights as safeguards against indirect injustices generated by those solutions.

There is one possible implication of the commons-framework that we should be wary about though, namely the attribution of "emissions rights". There are some indications that we are approaching a point at which it is not relevant at all to distribute rights of use; it may not be necessary with no, or even negative, emissions. One might, in this relation, even challenge the very idea of emissions rights (cf., Hayward, 2007). Even if distributing rights to emit is premised on a sound conviction about preventing an unjust burden from falling on the poorest people living in the developing world, it may be misconceived. It is not unreasonable to forego the right to emit greenhouse gases, given the problem of climate change, as long as it does not prevent the ultimate ends of development from being fulfilled. What matters is that that which is needed to meet basic needs is not compromised, not that those needs are met in exactly the same way as they were during industrialisation. The problem is more general still: rights should not be ascribed to means, but rather to the valuable ends that are in need of protection. In this case, it is not the emission of greenhouse gases that should be protected but subsistence, health and agency. From the concept of sustainable development this could be expressed as follows: we should not combat climate change in ways which put unacceptable risks on the needs of the present generation. This is a constraint on the search for a reasonable principle for distributing responsibility which seems to be better expressed under the burdens-framework. Let us now move on to some of the existing proposals for climate justice with these two frameworks in mind.

6.3 Two Approaches to Climate Justice

Over and above the two frameworks in which international climate justice can be discussed there are two approaches available. These could either be understood in terms of a distinction between "justice-based" and "fairness-based", or alternatively – and more informatively – as the distinction between "backward-looking" respectively "forward-looking" approaches. The former category covers proposals that take into account historical considerations, while the latter covers proposals that focus on the present point onwards.

The backward-looking approaches to climate justice determine the problem as being primarily intergenerational. The international distribution of responsibility is thought of as linked, directly or indirectly, to the historical contribution of greenhouse gases to the atmosphere. In section 6.3.1, two different backward-looking proposals will be presented and critically discussed, namely the 'contributor pays principle' and the 'beneficiary pays principle'. The overarching argument will be that even if they highlight an important

consideration that brings us towards an acceptable conception of climate justice, neither principle is reasonable on its own. Their failure lies in the fact that the one-sided focus on historical responsibility masks other relevant considerations that agents may reasonably hold. I will argue that this makes the justice-based views discussed infeasible in the normative sense presented above.

Several commentators have argued that the infeasibility of the backward-looking views is a reason for dismissing them as theories of climate justice (Traxler, 2002; Singer, 2010 [2002]; Miller, 2008; Posner and Weisbach, 2010). They claim that such historical considerations are irrelevant or even unjust to include, and that the fairness of distribution should be considered separately from historical patterns. In section 6.3.2, we will look at three different forward-looking approaches to climate justice: the equal per capita approach and the equal burdensomeness approach. They share a disregard of historical explanations of existing inequalities, whether in emission levels or in financial resources. What matters when it comes to distributing responsibility for addressing climate change is fairness. What constitutes a fair distribution, however, differs greatly between the different proposals.[6] The equal per capita approach holds that fairness demands that rights to emissions should be distributed equally. The equal burdensomeness holds approach that a fair distribution is one which creates an equal burden or sacrifice for all relevant actors. The contention here is that neither of these proposals fully captures what we would want of a theory of climate justice, the simple reason being that they too quickly dismiss the backward-looking considerations. That said, one feature of the forward-looking approaches is important as a complement to the views considered above, namely that there are other relevant considerations than how a particular distribution came about that matter when distributing residual responsibility.

6.3.1 Backward-Looking Approaches

6.3.1.1 The Contributor Pays Principle

Presumably the most widely embraced principle of justice in the (non-academic) climate change debate is the 'contributor pays' principle (also known as the 'polluter pays'). Its essence can be captured in the slogan "you break it, you buy it" (applicable in antique shops). The simple and intuitive idea here is that those who have caused the problem of climate change should bear the responsibility for doing something about it now. This could mean

[6]There are also "mixed views" that include both backward-looking and forward-looking considerations. These will be considered in conjunction with the "pure versions".

that the responsible agents should pay to mitigate the negative effects, pay for adaptation in vulnerable places or even compensate those exposed to harm as a result of climate change. The major advantage of this view, apart from its simplicity, is that it takes note of the fact that climate change is an intergenerational issue; that it is the accumulation of greenhouse gases throughout history that has put us where we are today.

This approach faces three basic problems though. First, most emitters are long gone although their emissions still are around. The large scale anthropogenic interference in the climate system dates back to industrialisation, and the longevity of greenhouse gases in the atmosphere is extensive (e.g., most CO_2 remains in the atmosphere for 5–200 years, but some stays for millennia). This makes the application of the contributor pays principle different from other instances of corrective justice where harm-doers and victims are contemporary. One could by-pass this non-contemporaneity problem through talk about collective instead of individual responsibility – e.g. nation states could be thought to persist over time – but one will then have to defend the controversial notion of collective responsibility. Second, if we only focus on the emissions caused by people still around, the problem of attesting culpability will remain. These two problems may not decisively rule out this kind of corrective justice, but they at least heavily circumscribe the view and make it unfit as an exhaustive answer to climate justice. Furthermore, a third, and more general problem is that the one-sided emphasis on accountability and the neglect of other concerns risks overburdening some actors, which could create new injustices.

Let us begin with the second problem, that of proving culpability. Normally it is assumed that in order to prove moral responsibility for corrective justice one must be able to prove that agent A not only was causally responsible for the harm to B, but also that the harm was negligently, recklessly, or intentionally caused. In order to identify the morally relevant emissions, the question then is: which activities resulting in greenhouse gas emissions were negligently, recklessly, or intentionally performed? In other words, when can we say that agents knew or reasonably should have known that greenhouse gases contribute to the problem of climate change? If and only if a point in time could be settled for this could we prove emitters post that date culpable. The most likely candidate is the year 1990, when IPCC released its first assessment report. This is also somewhere between the time, in the late 1980s, when scientists started to alert the problem and when it was formally acknowledged as a major political problem in Rio, 1992. Can we draw the conclusion that emissions prior to 1990 (give or take a few years) are morally blameless since the emitters then were ignorant about the negative consequences of activities resulting in emissions? Well, ignorance would at

least rule out intentionality. To assert blame for emissions prior to that date, a case must thus be made for negligent or reckless behaviour (e.g. argue that politicians should have applied precautionary measures). This argument would probably be hard to make though: how can individual citizens or politicians be charged with this in light of the lack of comprehensive scientific consensus at the time? It would seem to open the flood-gates for excessive, costly, and mostly unnecessary, risk preventions. A certain degree of scientific certainty on the basic facts of climate change and its impacts seems like a necessary condition for the assertion of moral blame (Cf., Posner and Weisbach, 2010, p. 111).

The choice of a base line year makes a big difference to the distribution of responsibility. If we look at the cumulative emissions of greenhouse gases (excluding land-use change[7]) from 1850-2002 we find the US at the top of the list, being responsible for 29.3%, followed by EU-25[8] responsible for 26.5%, Russia 8.1%, China 7.6%; the developed world responsible for 76% and the developing world for 24%. However, if we take the year 1990 as our base year, the figures change: the developed world is then responsible for 61% and the developing world for 39% (Baumert et al., 2005, pp. 31ff).[9] There is still an asymmetry, but not as conspicuous. In other words, if we were to assume moral responsibility only for the emissions after 1990, this would shift the burdens quite radically in favour of the developed world. It would also have another effect, in that all those emissions that precede that date would be unaccounted for, with no one being held responsible for them.

This brings us to a fundamental question underlying this discussion: how should we understand what causes the harm of climate change? Is

[7]The inclusion or exclusion of land-use change (e.g. deforestation) is a controversial issue. 18% of global greenhouse gas emissions are attributable to this source (or, in many cases: reversed sink; that is, as vegetation captures carbon it acts as a sink and reduced vegetation reverses that). If the emissions from land-use change since 1950 (which is the earliest data records available) are added to the total, the figures change radically: US share of global total, for instance, drops from 26.6% to 16.7% and countries with much deforestation in recent history (e.g. Brazil and Indonesia) dramatically increase their shares with the result that the shares of the developed and developing world are almost equal (51% respectively 49%). However, these figures are slightly misleading: whereas large deforestation has taken place in the developing world in recent history and thus been accounted for here, it took place further back in history in the developed world and during the time accounted for one instead has reforestation (which is a negative source). (Baumert et al., 2005, pp. 32, 91ff)

[8]I.e. the 25 states of the European Union as of 2004, which excludes the extensions thereafter, Bulgaria and Romania.

[9]It is also the case that the longer we wait for a climate treaty the smaller this gap will be. In 2030 it will be hard to argue that the developed world has a larger historical responsibility than the developing world (Posner and Weisbach, 2010, p. 101).

it merely the straw that breaks the camel's back that is problematic or is each earlier contribution also morally important? David Miller has argued that irrespective of the issue of culpability, we cannot claim that earlier emissions were morally wrong since they were harmless considered on their own. This is done in response to the possibility to entertain another sense of responsibility, which does not assume culpability: one could argue that agents (most plausibly nations) bear a kind of "outcome responsibility" (Miller, 2008). This responsibility, also known as 'strict liability', does not need an assumption about awareness of the harmful effects of greenhouse gas emissions to warrant redress. A paradigmatic case is a toxic waste problem: a local industry disposes residues into a river in good faith that it is not dangerous (one could add that there is no way of being even suspicious about any negative effects), later it turns out that the waste dumped into the river really was toxic and already has caused much harm to a nearby village. In such a case, Miller asserts, it is quite reasonable to assume liability according to an outcome responsibility. However, in the case of climate change, he argues, this does not make sense (Miller, 2008, pp. 131ff). The reason is that it is the *totality* of the emissions rather than individual particles that causes the harm, and only then when the cumulative emission levels have passed a certain threshold. The harm is thus not linear to emission levels, which means that it will be hard to argue even for an outcome responsibility for historical emissions:

> In the pollution model there is real harm from the waste that is discharged, although this is discovered only sometime after the discharge occurs. But in the global warming case, what chiefly matters is the combined and progressive effect of cumulative greenhouse-gas emissions, not the early emissions taken by themselves (Miller, 2008, p. 132).

Miller is right in one sense, but wrong in another. He is right to draw attention to the disanalogy with the toxic waste case, where each disposal is directly and incrementally harmful (even if it is not discovered right away) whereas the greenhouse gas emissions are only indirectly harmful (when composed of sufficiently many other emissions). We can thus conclude that strict liability does not make sense in the latter example, but we cannot rule out historical responsibility yet. Even if the early emitters did not act immorally, it might be that someone today should be made responsible on account of the fact that the early emissions are now part and parcel of the problem of climate change.

6.3.1.2 The Beneficiary Pays Principle

This leads us to consider a fall-back position, namely the 'beneficiary pays' principle. According to this, historical responsibility for greenhouse gas emissions is not grounded on causal responsibility but on the basis of the benefits that the present generation has gained from the excessive emissions of past generations. The argument here closely resembles the corrective justice arguments used in cases of "reparation". For instance, war reparation, slave reparation and colonial reparation; *viz*, although contemporary Americans are not causally responsible for the slavery, one could argue that they owe African Americans compensation as they have benefited from the historical injustice of slavery. Neumayer reasons in a parallel way about historical emissions:

> The fundamental counter-argument against not being held accountable for emissions undertaken by past generations is that the current developed countries readily accept the benefits from past emissions in the form of higher standard of living and should therefore not be exempted from being held accountable for the detrimental side-effects with which their living standards were achieved (Neumayer, 2000, pp. 10f).

One could understand this as the assertion of a kind of "transgenerational free-riding" (Gosseries, 2004), in the sense that sections of the present generation enjoy the benefit of activities of earlier generations whereas the costs of those activities will be incurred on third parties (i.e. future generations, primarily of the developing world).[10] Gosseries understands free-riding, based on a definition from David Gauthier, as "when (1) another person's action (2) benefits me (3) while the costs involved in it are being more than proportionately covered by other people" (2004, p. 43). Given this – there are some objections which Gosseries answers but it would take us too far astray to present them here – we might be in a position to ascribe a principle of historical responsibility that better reflects the close relationship between long-term emissions of greenhouse gases and national wealth. In other words, bring historic responsibility in line with the economic capabilities of today.

To return to Miller's point, historical emissions are morally innocuous when kept below a safe threshold level or when future negative impacts cannot be anticipated. The argument here, though, is that it is wrong to harvest the benefits of these – previously blameless – acts whilst knowingly passing on the associated costs to others. Because of what we know today it is not

[10] It bears to remember that there are other ways of understanding the beneficiary pays principle too. Edward Page, for instance, describes it generally as "a duty not to benefit from the undeserved suffering of others" (2012, p. 5).

reasonable to free-ride on acts that today contribute to climate change. Due to the longevity of greenhouse gases in the atmosphere and the fact that emissions have continued to accumulate past the safety level, historically blameless emissions may have another moral valence now.

There are some problems with this principle too. First, it can be argued that the benefits offset the costs in a way which makes the need for rectification redundant (Posner and Weisbach, 2010). That is, even if historical emissions are still contributing to climate change, they have also enabled a standard of living enjoyed by many today. Another issue concerns the measuring of the benefits on the basis of which obligations should be derived. This exercise necessitates the use of counterfactuals: in order to sort out how the world has benefited from historical emissions, we need to speculate about an alternative world without such emissions and maybe without industrialisation, which may be difficult to imagine.[11] A third problem is the following: say that we base climate justice only on a beneficiary pays principle; then those who happen to live in a nation with a great deal of historical emissions now all of a sudden are charged with the duty to compensate for their ancestors. This might mean that the "rug is pulled" from underneath their feet; the conditions upon which they have based their life plans now radically change, and for reasons out of their control.

The first argument should be less troublesome. Parts of the expected costs in the case of climate change are unacceptable (e.g. people dying in large numbers) and thus not open to be traded off against whatever benefits might have been generated. Even if the industrialised world is Pareto superior to a counterfactual alternative where industrialisation did not happen – not an unreasonable assumption *per se*, though it would of course be immensely hard to prove – most theories of justice will still hold that the benefits and costs must *actually* be redistributed (i.e. it is not enough that a distribution passes a hypothetical Kaldor-Hicks efficiency-test). The two other problems are perhaps harder to answer. Measuring benefits and in relation to that describing a counter-factual reality adequately might make the distributive question almost unsolvable, and thus the beneficiary pays principle unpromising as a single ground of climate justice. If the beneficiary pays principle is to deliver precise policy recommendations one would have to

[11] One additional problem for both the contributor pays and beneficiary pays principles is the 'non-identity' problem discussed in the preceding chapter. The problem here is that the activities resulting in climate change will also in many cases be a necessary condition for the existence of future individuals. It is thus hard to argue that these people are made worse off and in extension wronged as a result of climate change (see Page, 2008). As I argued in the preceding chapter, I do not think that the nonidentity problem is insurmountable, but will not say anything more about it now.

compare records of historical wealth with accompanying emissions; most likely such calculation would be very rough at best. Maybe a crude version of the beneficiary pays principle, used as a complement to the curtailed contributor pays principle, is sufficient though. It would allow the developing world to assert that some of the differences in economic capabilities of different nations reflect an unfair transgenerational free-riding, and should thus be influencing the distribution according to the 1990s division (or whatever year culpability is assumed from). The problem of frustrating people's reasonable expectations still remains though.

Why not, then, settle for the accountability we can derive from emissions where direct moral blameworthiness can be asserted (i.e. post-1990 emissions) instead of attempting a tough cost-benefit calculus for earlier emissions too? That the contributor pays principle is curtailed and quite unlike the one usually pressed by developing countries in climate change negotiations may not be a problem (apart from the obvious problem that some emissions go unaccounted for). Intuitively it does not seem unjust that responsibility is distributed according to such a principle if the prerequisites are at hand: on the contrary, the appeal of the antique shop-slogan is strong. Still there is something faulty with a principle that ignores the different conditions and abilities of different nation states. Even if it is still the case that the developed world bears most of the responsibility, the difference is not as conspicuous as before. The distribution of responsibility between the developing and the developed world would slowly be approaching parity with 39% and 61% respectively (notwithstanding the issue of land-use change that might close the gap even further).

This leads us to what was said in the introduction: would such a proposal on climate justice create any injustices of its own? The likely answer is yes. Since this idea is based solely on moral responsibility without taking into account the respective capabilities of different actors, it is not unlikely that some will be overburdened. Sure, one could insist that this is deserved and that lack of resources does not excuse liability. To do that, however, seems evidently unfair. The almost equal division of costs does not at all reflect the fact that some of the emissions held to be accounted for might have been necessary to maintain a minimal standard of living, whereas others have been used for luxuries (Cf., Shue, 2010 [1993]). In other words, this principle would punish the rapid development of the developing world in recent years, while it would excuse the already developed world as it continues to harvest the benefits of an earlier development phase. In this connection the beneficiary pays principle might seem like an appealing alternative, since it is indirectly sensitive to the different capabilities through the link between economic benefits today and historical responsibility. But what exactly is

it about this principle that strikes us as intuitive here; is it the fact that some of the differences in economic capabilities worldwide are the result of externalised costs, or is it rather the differences in themselves? An alternative principle of distribution might explain part of the appeal of the beneficiary pays principle, namely the so-called 'ability to pay'. According to this the burdens of climate change mitigation and adaption should be distributed according to ability alone. Unlike the previously discussed principles, the ability to pay approach is not based on historical justice whatsoever, and as such it better fits the discussion in the following section.

6.3.2 Forward-Looking Approaches

6.3.2.1 Equal Per Capita Entitlements

Let us then turn to a distributive schema almost as widely embraced as the contributor pays principle, namely the equal per capita division of emission rights. It emerges from, and, in fact, only makes sense under, the commons-framework presented above. However, given that the absorptive capacity of the atmosphere is a global commons that needs to be distributed, the equal per capita division may seem to come naturally. Peter Singer, as with most other proponents of the view, takes it to be almost self-evident: "If we begin by asking, 'Why should anyone have a greater claim to part of the global atmospheric sink than any other?' then the first and simplest response is 'No reason at all"' (Singer, 2010 [2002], p. 190). This is, of course, based on a set of premises of which some may be called into doubt. First of all, that the atmosphere is a commons must be explicated: what does it mean and what conclusion follows? Second, are there any other considerations (apart from equality) that should be accounted for when distributing the atmospheric commons?

As was explained above, once it is agreed that the atmospheric commons must be closed, indirect injustices might be implied, and it is this idea that an equal per capita distribution attempts to address. It is best understood through a fictional story: if each agent with an interest in the atmospheric commons were to sit down and come up with a usage acceptable to everyone, then the only reasonable proposal, *ceteris paribus*, would be that each agent gets an equal share. If no one has any other interest but to make the most use possible of the beneficial properties of the atmospheric commons, it would be unreasonable for anyone to demand a larger share than any other. Since the story indeed is fictional, and certain individuals and collectives have laid claim to much greater shares than others throughout history, the enclosure could make such inequalities permanent. The intuitive idea thus is that the

'over-extenders' should cut back in order to allow others to increase their share of the now scarce resource.

The equal per capita approach to climate justice thus makes two suggestions. First that the atmosphere as a global commons must be closed with further usage regulated, and, second, that this opportunity should be seized to redistribute the still acceptable rights of use equally. This amounts to a far-reaching redistribution of emission rights and in extension economic resources. The first problem that needs to be addressed is thus whether or not the redistribution mandated is politically feasible.

If we assume that the goal (i.e. cap) is to stabilise carbon emissions at their present[12] level[13], and make the division based only on current use (fully discounting historical use), an allocation of carbon per person and year of 1.3 metric tonne (mT) would result.[14] This means that people of some nation states radically overuse their allocation (e.g. Quatar at 14.58 mT, Trinidad and Tobago at 10.18 mT, United Arab Emirates at 9.43 mT are top-three on the list, and notably the US places itself on the twelfth position with 4.9 mT), whereas others underuse theirs (e.g. Afghanistan at 0.01 mT and India at 0.4 mT). Quatar would thus need to cut down their share to less than a tenth of the present level, the US by almost 75 %, and India would be allowed to more than triple theirs. China, the world's biggest emitter in absolute numbers, is just above the world average, at 1.4 mT.

It is also possible to hold a mixed version where the equal per capita approach is coupled with historical responsibility. Neumayer, for instance, argues for "assigning an equal share of the beneficent existence of the absorptive capacity of nature to every individual, *independent of his or her place in either space or time*" (pp. 9f, 2000, emphasis added). If historical (over/under) use should be deducted/added for each nation, the figures change. If some nations have used more than their fair share over a long period of time – say since 1990, the base line year for assuming culpability – it can be argued that a "climate debt" (or "emission debt") has been built up. For the major emitters to "pay back" the "debt", negative emissions must be achieved.[15]

[12]As the latest records are from 2008, we assume this year. All figures are from: http://cdiac.ornl.gov/trends/emis/meth_reg.html.

[13]This is just to give an idea about the practical circumstances; in reality, it will likely not be enough to reach such a stabilisation, rather, emissions need to decrease quite radically, thus making the schema even less politically viable.

[14]It is important to note the difference between measuring in terms of carbon (C) and carbon dioxide (CO_2). Figures are sometimes expressed in the latter terms – as we will see below when discussing emission trading – which is the same as to multiply the former by 3.667. Thus counted in terms of CO_2 per person and year, the world average is 4.7671 mT.

[15]I am not able to provide any accurate calculations of this possible climate debt; for an attempt at that see (Neumayer, 2000). But basically it is the following: if we assume

To argue for the per capita division straight away seems too utopian even for proponents of the view (Jamieson, 2001; Singer, 2010 [2002]; Baer, 2002). Baer, for instance, refers to such a proposal as a *reductio ad absurdum* of the per capita approach as it would "cause a harmful economic shock to the countries that had to make sharp reductions", which might be "judged unacceptable on utilitarian grounds" (2002, p. 401). It is a hard fact that emission trends are rising rather than decreasing, in most major emitting countries, and certainly on a global level. The per capita division thus seems like an empty wish or mere utopian ideal at present. Jamieson also points out that "[i]f the world only can stand so many GHG emissions, we have an interest in seeing that they are allocated toward efficient use" (2001, p. 300). For these reasons most proponents of the equal per capita approach try to accommodate the view to the present conditions. The most common way of doing this is to suggest an emissions trading scheme, where countries are allowed to buy and sell the permits allowed under the cap. In this way a single country that has a demand for more permits than initially distributed would have to pay some other country with lower demand to arrive at a desired allocation of permits under the accepted cap. It is sometimes also added that "[m]arkets will allocate permissions towards beneficial use" (Jamieson, 2001, p. 300).

What this means is that when we evaluate the equal per capita approach, it is not sufficient to assess the end-product, we must also look at the ways of getting to that end, which in this case means emissions trading. Is emissions trading an efficient, just and feasible way of addressing climate change? It could be illustrative to think about what such a scheme would mean in monetary terms.[16] The permits used today in the existing emissions trading scheme in the EU (EU-ETS) account for CO_2 rather than C, which means that we must first translate the figures used above: the world average (1.3 mT C) then equals about 4.8 mT CO_2 and, for example, the per capita emissions of the US are about 18 mT CO_2. If the per capita program was implemented the US would need to buy permits (assuming that no domestic reductions take place) for 13.2 mT (18-4.8=13.2) multiplied by its population (around

that an equal per capita entitlement is 1.3 mT, then, for example, the US has exceeded this goal over the last 19 years (assuming 1990 as a base year) with on average 3.9 mT. If we assume that it should be paid back over the coming 19 years, it would mean that from now and 19 years ahead each person should be allocated 1.3 mT minus 3.9 mT, that is -2.6mT (or little more than that because the population now has increased). In other words, not only is zero emissions needed but also further and radical emission reduction in other places or through other means.

[16]The following back-of-the-envelope calculation is inspired by Posner and Weisbach (2010, p. 123), but the input numbers differ.

300 million), that is 3.96 billion permits; if the permits are traded at 25 USD (around the initial price set for the EU-ETS)[17] then the total cost would be about 99 USD billion per year. The foreign aid budget of the US in 2010 was about 30 USD billion in comparison. It is enough to look at the resistance to the much less demanding requirements of the Kyoto-protocol to understand that it will be hard to convince nation states to pay amounts double or triple the size of existing foreign aid budgets as this proposal implies.

Does this mean that the per capita division fails on account of being infeasible? It does not according to proponents of the view. Jamieson merely concedes that it is "[t]oo bad that it [i.e. the proposal] does not have much chance of being adopted" (2001, p. 303). Others retreat to a pure ethical sphere disconnected from the practical reality, as Neumayer does when he states that "a right principle is not refuted by the mere fact of not currently being politically feasible" (2000, p. 13). Similarly both Baer (2002, p. 404) and Singer (2010 [2002], p. 197) point out that they present *ethical* arguments that cannot be refuted by the fact of unwillingness. They have a point here: the mere fact of political unwillingness does not refute the case for a per capita division. Such resistance may be ungrounded or unreasonable and hence without justification. To repeat a point made above: what matters when we assess the feasibility of a proposal is not whether resistance exists here and now, it is rather if this resistance is well-grounded and agents cannot reasonably agree to the distribution. The sheer size of the proposed global redistribution of resources is not important – it may very well be reasonable given the problem at hand. However, the question is whether or not the far-reaching redistribution of resources under the per capita division *is* reasonable in light of the problem of climate change. In other words, is it *un*reasonable for any party to resist the proposal? In order to answer this we should end this section by looking at a more principled critique of the per capita division.

When we look closer at the commons problem, it may turn out that the equal per capita division is not straight-forwardly implied. This is what Luc Bovens (2010) finds in an argument in favour of grandfathering[18] emission rights (cf., Posner and Weisbach, 2010, p. 135; Knight, 2013)[19]. It should be

[17]However, this price might be both lower and substantially higher. At present in the EU-ETS it is lower, but under a stricter market it might rise up to 200 USD/tonne. Nicholas Stern has argued that the price would need to be 40 EUR/tonne (around 52 USD) per tonne of CO_2-e to hold concentration below 500 ppm CO_2 e (Stern, 2010a, p. 105).

[18]The term "grandfathering" comes from the US after the Civil War (1861-1865), where some whose grandfathers had had the right to vote before the war where exempted from the stricter voting rules then imposed. The idea basically is that an old rule continues to apply to old situations whereas a new rule applies to all future situations.

[19]Posner and Weisbach's defence of grandfathering is closer to being a pragmatic one. They appeal to the need to reach an agreement among self-interested states. Knight's

noted that Bovens's argument is an ethical one, thus different from the more common pragmatic argument in favour of grandfathering. The pragmatic version of the proposal is fully compatible with an equal per capita approach and should rather be seen as an alternative to how emissions trading has been conceptualised above. If it seems politically impossible to implement an equal per capita division of emissions rights, even with the help of an emissions trading scheme, an alternative is thus to gradually phase out the inequalities in emission levels globally towards reaching a desired cap. That would be to use grandfathering as a temporary exemption, for reasons of *Realpolitik*, soon to be phased out in order to arrive at a more egalitarian division; a proposal closely resembling a popular view called "Contract and Converge"[20]. Bovens, however, attempts a more principled defence of grandfathering.

The basis of his argument is John Locke's famous defence of private property rights: when someone mixes his/her work with a piece of unowned and unmanaged commons, it gives rise to legitimate property claims under the condition that s/he leaves "enough and as good" for others and makes good use of the land. Some may homestead larger plots than others, but as long as the two conditions are respected the resulting inequalities are not unfair. At the point at which the commons must be closed because no further homesteading can be done in respect of the enough-and-as-good condition, we have a situation in which some may be denied the "right" to land (or in this case, to the absorptive capacity of the atmosphere). In the words of Bovens: "[p]ast usage establishes differential claim rights to present and future usage of the atmospheric absorption capacity, that is, to differential claim rights to emit GHGs" (2010, p. 7). This amounts to an acceptance of the first and a denial of the second suggestion of the per capita division presented above: the commons must be closed, but emission rights must not be redistributed on a per capita basis.[21]

The natural response here is that this does not make sense as unlike land

defence of grandfathering is an instrumental welfare utilitarian one: to allow prior emission levels (*pro tanto*) weight in a future distribution of emission rights is instrumental to maximising utility, alternative to securing the highest possible equal average welfare levels. (Knight's reasoning is somewhat similar to some of the proposals of equal burdensomeness considered below).

[20]Contract & Converge (C&C) is a trademarked concept of the Global Commons Institute (GCI). It was first proposed in a statement of theirs in 1990, see: http://www.gci.org.uk/.

[21]It should be noted that the same objection mentioned above against the very idea of "emission rights" is relevant here too. However grandfathering is conceived, it is highly doubtful that it should ground emission *rights*. Such "rights" may be obsolete as of now. A sounder conclusion, if a case can be made for grandfathering, is that some consideration must be paid to reasonable expectations based on past usage, so that it to some extent is allowed to influence how the burdens of mitigating climate change fall.

the atmosphere cannot be fenced off, and accordingly while land may be turned into a private property the atmosphere may not. Bovens responds that it is not the excludability feature that determines whether there are any customary rights. In a classic common pool resource example of a lake and fishermen in competition under a certain fishing-yielding capacity, it is regularly accepted that differential historical usage could give rise to differential claims despite the non-excludability condition: the resolution is to define the rights in terms of acceptable quotas. The main reason for doing this – just as in other cases of customary rights – is that different fishermen have made differently sized investments and thus have reasonable expectations about the continuation of existing practices.[22] The same is true of the atmospheric commons: due to differences in historical usages of the absorptive capacity, agents have made investments and now have reasonable expectations about the future usage. The Lockean argument thus seems to suggest that differential claims to the atmospheric commons may indeed be (*pro tanto*) reasonable, that is, if the enough-and-as-good and no-waste conditions have been respected. Now, in the case of the atmospheric commons it seems clear that the former condition has not been respected as climate change already is on the move. The question is, when did we pass this point?

It is of course hard to come up with an answer to this, but if a rough idea could be given then...

> [d]eveloped countries should be able to demand that, in deliberations, *some* respect be paid to their appropriations of the atmospheric absorption capacity that precede the cut off point at which the enough-and-as-good condition was first violated (Bovens, 2010, p. 14).

That does not mean that the developed world is let off the hook, but importantly it shows that it is not inherently unreasonable to oppose the equal per capita division on the enclosure of the atmospheric commons. We should take this to indicate that the feasibility issue of the proposal might indeed be worrisome; the political unwillingness to the distribution may be partly well-grounded.

Does this also mean that we have shown that it is grandfathering that should be the principled answer to climate justice? No, it does not for several reasons. Most importantly, as Bovens adds:

> it would be bordering moral madness to tell India and the US that,

[22]Bovens gives the example of how the EU does not partition fishing quotas on an equal per capita or country basis, but takes into account the relative importance of fishing for the respective economies (2010, p. 13).

> since their GHG emissions per capita were, say, 1:100, at the time that climate change posed no threat, we will now fix the ratio of their future emission rights per capita at 1:100 (2010, p. 16).

Reasonable expectations based on past emission levels is just one example of what matters when future usage is to be determined, in addition, one may add equality (e.g. equal opportunities), sufficiency (e.g. subsistence rights) and utility (whether the distribution maximise utility). Neither historical usage, nor equality is reasonable as the exclusive focus in negotiating a fair distribution of the atmospheric commons: a plurality of concerns must be weighted together.[23]

The conclusion of this discussion must be that the equal per capita division is not a serious candidate to climate justice. The best version of the view might be used as a benchmark for a future where emissions are rather equally divided among the people of the world. However, this is the natural utopian end-point of any attempt to address climate change, and as such does not get at the controversies here and now. In order to arrive at that end point we need to include many concerns other than equality. To present the proposal as an answer to climate justice is just negatively utopian. Furthermore, these issues about the feasibility of the proposal are not significantly alleviated by the addition of an emission trading scheme, at least not in the way it has been conceived so far. Finally, it should be mentioned that the per capita approach coupled with historical responsibility fares even worse. Not only would it exaggerate the practical obstacles, but it might even give rise to outright injustices. If the per capita entitlements are defined as an equal share for everyone that has ever lived, and people of the present generation are held liable for rectifying historical overuse, the resulting distribution might deprive these people of equal opportunities and perhaps the means of subsistence, not to mention frustrate their reasonable expectations on the future.

6.3.2.2 Equal Burdensomeness

The equal per capita approach aims to seize the opportunity that the enclosure of the atmospheric commons presents to redistribute rights of use according to an egalitarian ideal. But, as was suggested in the previous section, there are no guarantees that this resolves the tragic development of climate change. If some parties have reasons to dispute the redistribution, the result might be

[23]It is possible to assert – though hard to convincingly argue for – a stronger view of grandfathering, where nothing but prior emission levels determine future emission entitlements. But, as Carl Knight shows in a recent article (2013, p. 411), this is not the most relevant sense of grandfathering to the climate justice discussion.

a continuation of the over-use of the commons. The alternative considered in this section takes this risk seriously by suggesting that the closure of the commons is important enough to downplay justice-based concerns to the emphasis of feasibility. What matters first and foremost is that climate change is prevented or mitigated as far as possible; prior entitlements and historical injustices are of only secondary importance. Given that climate change is rightly described as a commons problem and the fact that there is no functioning global Leviathan that could enforce the desired solution, the idea here is that fairness could act as the motivation to lead the parties in the right direction. David Miller puts it as follows:

> [S]o long as agreement can be reached on a fair policy for tackling climate change – fair in the sense that it allocates the costs of adjustment according to principles that all can understand and accept – then it is reasonable to expect the signatories to implement the measures that are needed for them to comply with the targets that have been set (2008, pp. 122f).

The argument then continues by suggesting that the most feasible approach, i.e. the one most likely to be accepted by all parties, is one in which everyone shoulders an equal weight/burden/sacrifice. What constitutes that kind of equality has been subject to different ideas, as we will soon see. It should be noted though that on neither proposal does equal burden mean equality in actual emission levels (as with equal per capita entitlements), rather it is the efforts that should be comparable. The equal burdens approach could thus fittingly be described as an instance of the UNFCCC slogan 'common but differentiated responsibility'.

The best way to understand the equal burdens approach perhaps is as an alternative to the equal per capita approach, as it is presented by Martino Traxler for instance:

> What an equal per capita chore division fails to achieve is a division that affects each person in the same way or in the same amount. In particular, a per capita division places equal burdens on each person, but it fails to allot equally burdensome chore-shares, and, in matters of chore division, burdensomeness is the consideration that is closest to our hearts so that an equally burdensome division is deemed the fairest chore division (2002, p. 125).

Similar arguments are found among other defenders of the equal burdensomeness principle. David Miller points out that it is different from the equal per capita approach in that the latter "takes no account of societies' differential

capacity to reduce their emissions, and it is unfair for that reason" (2008, p. 148). Posner and Weisbach argue that "the per capita system is not attentive to the differential distributional effects of climate change and abatement costs, but in effect gives every person the same asset" (2010, p. 138). In other words, the argument is that the equal per capita approach is unfair since it fails to consider the relative positions of the different parties negotiating the agreement. The impacts of climate change will be quite different for parties depending on both social and natural conditions (cf., the threats of floods facing the Netherlands and Bangladesh); and the costs of abatement will be differently onerous for the various parties, in part because of different capabilities and in part because of differences in historical investments. The per capita permits system seems too crude in this respect, and will rightly be judged unfair by some parties.

The first question for this approach is that of finding an acceptable measurement of costs or burdens from which a fairer distribution could emanate. Miller's proposal is most straight-forward: "reductions in GDP projected forward in time as a result of the measures necessary to reduce emissions by the required amount" (2008, p. 146). If countries chose to do something about climate change, e.g. invest in renewable technologies or forego carbon-intensive growth, they take on a cost – the difference between the returns from spending financial resources in such a climate friendly way compared to a climate unfriendly way can be represented as the opportunity cost. Miller's proposal for a fair distribution of the climate change (mitigation) burden is equal opportunity costs. This proposal seems to miss many crucial features of what we would want climate justice to deliver, for instance it is blind to the fact that some resources are essential whereas others are frivolous. Miller of course recognises this and suggests that "subsistence emissions" should be exempted from the cost-division (2008, pp. 145f). Traxler, on his part, takes this to suggest a more radical non-market based measurement of burdensomeness. Phrased more rhetorically: "monetary equal sacrifices in terms of caviar and in terms of cassava or taro would not amount to equal sacrifices in terms of human well-being" (Traxler, 2002, p. 132). It is costs in terms of human well-being that count for Traxler: a fair distribution of the climate change burden creates comparable pains measured in terms of human well-being for all actors. A third idea comes from Posner and Weisbach and is what they refer to as "International Paretianism": a fair climate treaty is one in which "all states must believe themselves better off by their lights as a result of the climate treaty" (2010, p. 6). That is, it is state-interests that should be paid equal consideration to – and they should not only be similarly affected, but the interests of all states must simultaneously be advanced by the climate treaty.

It is rather unclear what cost, burden or state-interests equalisation means in practice. Both Miller and Traxler suggest that it will amount to differentiated actions and more actions from the rich societies. Miller also suggests that it will reward societies that have previously made climate-friendly investments, as further investments for them are more expensive than for countries that have not yet steered onto that course, they will be excused for doing less now (2008, p. 148). All of these speculations are empirical in nature, and as such cannot be settled here. But it can be pointed out that the reversed argument is not far-fetched either: as the developed world is heavily locked-in to carbon-intensive societies, whereas many developing countries now are in a position where they plan infrastructure and energy supplies, it might be the latter group of countries that would need to make most emission reductions on the equal burdensomeness approach. This worry is further fueled by Posner and Weisbach's International Paretianism. Their proposal of grounding the distribution of the abatement burden on the respective interests of different states means that the states at greatest risk of severe impacts from climate change – also those that benefit most from mitigating action – should pay most. As the most vulnerable states in the case of climate change are also those least developed, the proposal in effect demands that the poor and destitute pay the most to combat climate change. This seems patently unjust.

Posner and Weisbach explicitly dismiss this objection as being irrelevant to the question at hand. They argue that while we do have obligations to help the poor, "there is no obligation to fulfill [these] duties [...] through a climate change treaty" (Posner and Weisbach, 2010, p. 175). The other proponents of the equal burdensomeness approach take a more moderate position and attempt to avoid such conclusions by making their approach sensitive to the priority of basic needs, either directly (as with Miller's exception) or indirectly (as with Traxler's non-monetary measurement). But there is something slightly *ad hoc* about these amendments. Miller's way of exempting subsistence emissions is in essence a departure from the equal burdensomeness approach; contrary to what is claimed at the outset, it is not the case that the proposal demands that the efforts of all parties are equal. This is not unreasonable, but it suggests that the equal burdensomeness approach only works if accompanied by some other principle. Traxler's version seems to side-step this need for complementarity by the use of a non-monetary measurement. The reason for this modification of the traditional way of measuring opportunity cost is commendable, but also places a question mark over the original argument. As Stephen Gardiner has remarked:

> In practice, it means that Traxler's equal-burdens proposal actually

> demands massive action from the rich countries before the poor countries are required to do anything at all (if indeed they ever are). And however laudable, or indeed morally right, such a course of action might be, it is hard to see it as securing the politically stable agreement that Traxler craves (2010 [2004], p. 19).

Could it be that, however implausible it seems, it is the version proposed by Posner and Weisbach that should be preferred on account of its feasibility? In order to answer that we need to say something more about the feasibility issue.

The main benefit of the equal burdensomeness approach, according to its proponents, is that it presents a way out of the tragedy of the atmospheric commons in the absence of functioning enforcement mechanisms. If no authority is in a position to force others to act only an agreement that is acceptable according to each party stands a chance of generating general compliance. This seems true; but the specification of what constitutes an acceptable deal is more doubtful. Why should the *equalising* of costs or burdens for addressing climate change be acceptable to the very differently situated parties? As we have seen in the previous sections, it is not unreasonable to argue that some have contributed more to the problem and thus should shoulder additional burdens; it is not unreasonable to take the benefits of historical emissions to strengthen the obligation to act now; it is not unreasonable to take the violation of the enough-and-as-good condition to shift the burdens either. What about the proposal of Posner and Weisbach; surely a deal that promotes the interests of all must be given universal acceptance? The question we must ask in relation to this proposal is the following: are there any legitimate complaints that may be raised by a negotiating state to a proposal promoting the long-term interests of all? If we accept the underlying view that the costs of abatement are globally rational to take in relation to the costs of inaction (cf., Stern, 2010b), it may seem that little could be inferred here. But this misses the point. The fact that all states are equally benefited over time on this proposal does not guarantee general compliance. From the perspective here-and-now, it may be reasonable for a state faced with more direct and urgent concerns to downplay the long-term benefits of strong and early measures against climate change. What is needed to generate incentives for action is not necessarily a fair division of the long-term benefits of the undertaking, rather it is that each party sees it as beneficial here-and-now to act. Posner and Weisbach's proposal is insensitive to the initial positions of the parties, and – ironically, given the critique against the equal per capita approach – fails to consider the importance of differences in capabilities. Furthermore, as I have already argued, as a reasonable argument can be given for the inclusion

of principles of historical justice, a deal excluding such concerns is less likely to be generally accepted.

6.4 Constructing an Eclectic Approach

In this chapter, the priorities of sustainable development have been assumed as a reasonable starting point for dealing with international climate justice. The justification for this assumption has been provided in previous chapters, where it has been argued that it is reasonable to give a strict priority to the provision of basic needs of present and future individuals under certain conditions. This assumption is also grounded in the UNFCCC and related protocols. On this basis we have worked through the most common principles proposed for distributing (residual) responsibility for climate change abatement between nation states. The general conclusion is that it seems that reasonable opposition could be levelled against any of the existing principles, if proposed as a unique and exhaustive solution. At the same time, each principle brings important considerations to the negotiating table. This is not a surprising conclusion in light of the reasonable pluralism previously discussed, if anything it would be expected that the international scene should host more reasonable (and, of course, unreasonable) disagreement. Given the constructivist method of this thesis, what we must do now is construct principles of international climate justice sensitised to this condition. My proposal is that we start with the overlapping consensus on the moral importance of protecting the basic needs of the present generation worldwide, and that we add to that an eclectic approach where other considerations are all weighted in. The full details of this eclectic approach – for instance, how the different considerations over and above an international needs-principle are to be balanced against each other – cannot be worked out here. In fact, I believe there are good reasons to refrain from trying, as these questions in the end are empirical. However, a broad outline can be provided.

This can be made negatively. We can think about how the concept of sustainable development – assuming its general acceptability – rules out various foundations of international climate justice. First, and most directly, if a proposed distribution fails to accommodate a respect for the basic needs of the present generation, for instance by allowing too heavy a burden to fall on vulnerable actors, it cannot be a principle of international climate justice. Even if this is not an intended effect of the contributor pays principle, it might still be implied by the fact that only a curtailed version, covering post-1990 emissions, is defensible. On this version of the contributor pays principle, countries that during the last 20 years have undergone a rapid

development will need to shoulder a substantial part of the responsibility for addressing climate change. Besides other concerns that can be raised against this proposal, the worry now emphasised is that the distribution it proposes might pose a serious threat to the provision of the basic needs of individuals in rapidly developing countries. Whether this threat is serious or not is hard to say – China, for example, seems well equipped to do much more without necessarily risking needs provision – but it at least explains why some actors may reasonably reject an international climate deal premised on this proposal.

The problem takes a slightly different form for the juxtaposed beneficiary pays principle. On this principle it is the differences in economic capabilities worldwide that should influence the distribution of responsibility for addressing climate change as they in part are a result of an unfair "transgenerational free-riding". On the reasonable assumption that the beneficiaries mostly are in the developed world, this principle may not risk posing a threat to basic needs provision. Apart from some practical problems in its application, the most important concern with the beneficiary pays principle is that it risks being unduly harsh on the reasonable expectations people have. Again, drawn to its limits, the application of this principle might be thought of as unreasonable by some agents. If we are concerned about finding a just and feasible distribution of the burdens of climate change there is nonetheless something important to keep from these two principles. The historical fact that individuals of some nations have emitted substantially much more than others, to their benefit and others disadvantage, is a legitimate concern that should influence the distribution of responsibility.

In section 6.3.2 another set of principles, forward-looking rather than backward-looking, were discussed. Here too we saw that, although partly promising, neither of these fairness-based principles convincingly accommodated the priorities of sustainable development. First, the equal per capita approach was shown to be problematic for several reasons. Such a radical redistribution of rights of use to the atmospheric commons may threaten basic needs provision in different ways. One way is when the acceptable quotas sanctioned on this approach are too small to cater for the basic needs provision; what is needed to lead a decent life is context-dependent, and in some places it may amount to far higher emissions than in others (e.g. emissions from heating in cool places). Another problem with this principle is that it is unreasonable seen from the perspective of some high-emitters. Through a discussion of a moral case for grandfathering emission rights, it was shown that there are moral reasons to attribute weight to differences in historical emission levels. Even if the Lockean principle of rectifying historical breaches of the enough-and-as-good and no-waste conditions would be an equally unpromising approach as redistribution according to a strict

egalitarian principle, it highlights a consideration which legitimately can be filed. An equal burdensomeness principle was also discussed. This *prima facie* seems like the most promising way forward from the perspective of sustainable development, in particular in regard to the exceptions made for basic needs. However, there is a major flaw with this position, namely the assumption that backward-looking considerations are of no importance whatsoever. As the claims of historical injustices in emissions are justified – even if the justification is not as comprehensive as is often claimed – it is both unjust and infeasible to exclude such considerations in the distribution of the climate change burden.

From these conclusions the eclectic approach should be advanced. Just as the name suggests, it would combine parts of the other principles discussed. It takes from the contributor pays principle the idea that responsibility should be partly based on post-1990 emission records; from the beneficiary pays principle that also earlier differences in emission levels should influence the distribution; and from the forward-looking approaches the idea that fairness matters, in the sense that comparable efforts should be aimed at. The eclectic approach is best understood as roughly taking up a middle-ground between two extremes: it recognises that an ideally just distribution of responsibility is not feasible but at the same time avoids the conservative realist conclusion of taking the bids as they are. It ties in to the following question posed in chapter one: can we construct a theory for distributing responsibility for addressing the problem of climate change such that all relevant agents can reasonably comply with it? It gives an affirmative answer: through balancing the relevant conceptions of man and the situation faced, we can construct a "realistic utopia". While utopian ideas make the perfect enemy of the good, to paraphrase Voltaire, and conservative ideas are blind to progress on the whole, a realistic utopia proposes realistic steps towards a more just state of affairs. When we think about the international dimension of climate justice we must, like in the intergenerational question domestically considered, construct a proposal where shared ideals and convictions are probed to their limits. We must recognise the fact of reasonable pluralism, that differently situated agents will reasonably disagree about any proposal based on a substantial normative theory, but humbly look for points of practical convergence.

One may wonder about the practical meaning of the idea of a realistic utopia. Is it the case that only narrowly confined state interest matters; is any kind of utopian ideal doomed? This is of course hard to say, but there are at least some indications from the international climate change negotiations that there is a place for international justice. The "realist" position, which holds that economic power is the sole determinant of international politics and which underscores much pessimism on these matters, is exaggerated.

In a study about the determinants of bargaining success in the climate change negotiations, Florian Weiler found that although economic power is an important determinant, there are several other considerations that affect the outcome. The most important findings are the following. The salience of the issue, as to what extent the negotiating party is exposed to the problem of climate change, is a compelling consideration conducive to negotiating success. But salience as to what extent parties are exposed to the "solutions" to climate change, i.e. mitigation, was shown to have a negative effect on bargaining strength; in other words, to have high levels of greenhouse gas emissions is not to the benefit of a party in the negotiations. It should be noted though that these positive and negative effects of salience are partly offset by the inverse correlation to economic power that holds; that is, since the countries with high emission levels also generally are economically powerful and countries vulnerable to climate change generally are less economically powerful. Finally, the "strongest finding", according to Weiler, was that the adoption of an extreme negotiating position is to the disadvantage of a negotiating party. The overall conclusion thus is that:

> [t]he presented analysis suggests that bargaining success has been positively affected by a country's external power and vulnerability to climate change impacts and negatively affected by the extremity of a country's negotiation position and its share of GHG emissions" (Weiler, 2012, p. 565).

Looking at the actual climate change negotiations will, of course, not give us a conclusive idea about the practical limits on climate justice. To repeat: the feasibility is not determined by what actually works or not, rather by the extensions of the practically possible. Some of the opposition to climate justice is justified and some is not. It is thus impossible to assert any clear conclusions from the climate change negotiation practice. What can be said, however, is that fairness matters. The fact that it is not economic power alone that dictates the outcome of the negotiations at least gives hope for a morally justified conclusion some day. It is unlikely that all historical injustices related to emission of greenhouse gases will be recognised and rectified, but as salience obviously is of importance, it is not unreasonable to propose that justice will matter to some extent. The relative utility to each party of a climate treaty apparently is important too. A realistic climate utopia must recognise all these valid considerations in order to secure the priorities of a sustainable development in light of defiance as well as of involuntary noncompliance.

6.5 Conclusion

Let us now conclude this lengthy discussion of the different alternatives to international climate justice. There is no need to once again summarise the discussion. We can only end by emphasising how intricate the climate question is, whether in its intergenerational or international dimension. The possibilities of taking steps away from status quo, or business-as-usual, are slim, but of crucial importance. In this chapter I have proposed that when assessing the prospects for climate justice we should avoid two extremes. We should not dismiss a proposal on basis of it being presently and actually infeasible. But in considering a different sense of feasibility as the relevant one to the discussion, we should neither be lured into thinking that any conceivable distribution is relevant; we must additionally avoid unanchored utopias. The work instead is to balance a realistic utopia, as just as possible given realistic conceptions of persons and their situation. In the end this is an empirical and political question. The only point made here was that, as a point of practical convergence, we can already now assert that any principled way of addressing climate change must not risk the provision of basic needs of presently existing people worldwide. This is one of the limits on development; now, in the final chapter of this thesis, we shall turn to the others.

Chapter 7

Limits on Development

> *In the final analysis, this is what it amounts to: furthering the common understanding and common spirit of responsibility so clearly needed in a divided world.*
>
> — *Our Common Future*, World Commission on Environment and Development (WCED) 1987, p. xv

> *Even we self-identifying, self-conscious, and supposedly self-maintaining substances fail to see how thoroughly embedded we are in an environment that supports us from outside, how thoroughly our perceived internal unity and cohesion depends on what goes on around us.*
>
> — *Self-Constitution*, Korsgaard 2009, p. 41

7.1 Introduction

The conceptual analysis of sustainable development has come to this: the provision of basic needs is a moral limit on the activities that we engage in which have consequences for others. Catering for the needs of others is each and everyone's responsibility – and in extension, we all share a responsibility for maintaining the environmental conditions critical to this end. We have seen, however, that this simple imperative is more illusive than one might first think. The specification of the conception of sustainable development is far from self-evident; every step – from determining the agents, the subjects, the content of the principles, the values, and various trade-offs – is controversial and a potential site of contestation. In this final chapter I shall sum up and draw some conclusions from the discussions we have had so far. I will do this by introducing a last piece of material from the conceptual analysis, not yet directly discussed: the idea of limits on development.

A rough understanding can be provided by a textbook analysis of the concept of limits, before we move on to a more detailed discussion below. From Oxford English Dictionary, the following meanings are most commonly associated with 'limits': 'a boundary, frontier; an object serving to define a boundary, a landmark'; in narrower sense: 'a boundary or terminal point considered as confining or restricting'. Alternatively: 'one of the fixed points between which the possible or permitted extent, amount, duration, range of action, or variation of anything is confined; a bound which may not be passed, or beyond which something ceases to be possible or allowable'. For the present discussion, we should focus on the last passage, because whereas the first meanings quoted merely point to the idea of a limit, the latter suggest roles that limits may play on a general level. When we try to understand the idea of limits to development, we need more information than that there are some boundaries or frontiers to development: we must also know what it means to breach them.

In chapter two, I argued that one of the meanings of sustainable development is the recognition of "ultimate limits to global development". These are "determined by the availability of energy resources and by the biosphere's capacity to absorb the by-products of energy use" (World Commission on Environment and Development (WCED), 1987, p. 58). In addition to these ultimate limits, we saw that the Brundtland conception contained two "key concepts", one of which was "the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs" (World Commission on Environment and Development (WCED), 1987, p. 43). On a first approximation we could say that two notions of limits are presented here: natural and social limits on development.

The success of development activities is determined by both natural and social preconditions. In order to, say, maintain a piece of farmland one needs to pay attention to both natural factors (soil quality, nutrients, rainfall patterns, climatic variables, etc.) as well as social and technological factors (e.g., ownership, organisational skills, issues of distribution, harvesting techniques, know-how, etc.). The farmland may fail to provide for the farmers needs due to their failure to attend to either of these: social and technical limitations may cause the land to be under-utilised with the result that it cannot provide for everyone's needs, or the land is instead overexploited as natural constraints are neglected, with similar results. This is not only true of a piece of farmland, but more generally so. Consider another example, from Lester Brown (2011). This example shows how the integrated world in which we live makes the global environment a precondition for many seemingly domestic activities we could engage in. Brown is specifically drawing attention to how the melting of mountain glaciers as a result of climate change will lead to water shortages,

which in turn will have a negative impact on the world grain market:

> For Americans, the melting of the glaciers on the Tibetan Plateau would appear to be China's problem. It is. But it is also everyone else's problem. For U.S. consumers, this melting poses a nightmare scenario. If China enters the world market for massive quantities of grain, as it has already done for soybeans over the last decade, it will necessarily come to the United States – far and away the leading grain exporter. The prospects of 1.3 billion Chinese with rapidly rising incomes competing with American consumers for the U.S. grain harvest, and thus driving up food prices, is not an attractive one [...] The idea that shrinking glaciers on the Tibetan Plateau could one day drive up food prices at U.S. supermarket checkout counters is yet another sign of the complexity of our world (Brown, 2011, pp. 54f).

This is a story about the ecological integration of our world today. It is framed from the perspective of narrow self-interest: U.S. consumers have reasons to care about environmental conditions far away given that they want to keep their domestic food prices down. There is of course also a moral dimension to this example: American greenhouse generating activities have a negative impact on Chinese food production (and vice versa), which is a moral reason for concern. Even if the ecological integration and relevance of both social and natural development is not always as obvious as with the simplified example of farmland maintenance, it is fair to say that such considerations are crucial for the success of most lasting activities engaged in today.

The subject can further be approached by distinguishing it from the parallel discussion about 'limits on growth'. The idea here is not to pose the specific question 'what should be sustained over time?' and consider alternative answers, such as GDP, utility, or throughput (cf., Daly, 2005). That discussion is no doubt important – it has been extensively conducted by 'environmental economics' and 'ecological economics' – but is too specific for our purpose. The philosophical approach to the matter instead poses the following question: what reasons do we have (if any) to take into account natural and social limits in development practices? These practices may be of various kinds: planning for the future, caring about our children, planting trees, constructing buildings, extracting oil, etc.. They are simply defined by being temporally protracted. What we want to know here is whether the engagement in such activities commits one to some degree of environmental concern. The hypothesis is that it does, and that sustainable development is a reminder of just this fact. This is the conclusion I shall argue for below. It builds on the ideas contained in the following quote from the Brundtland report:

> Growth has no set limits in terms of population or resource use beyond which lies ecological disaster. Different limits hold for the use of energy, materials, water, and land. Many of these will manifest themselves in the form of rising costs and diminishing returns, rather than in the form of any sudden loss of a resource base. The accumulation of knowledge and the development of technology can enhance the carrying capacity of the resource base. But ultimate limits there are, and sustainability requires that long before these are reached, the world must ensure equitable access to the constrained resource and reorient technological efforts to relieve the pressure (World Commission on Environment and Development (WCED), 1987, p. 45).

In other words, it is a recognition of an interplay between natural and social limits on development, not a single-handed focus on one at the expense of the other. With this in mind let us begin digging into the concept of limits, starting with environmental or climatic limits.

7.2 Environmental and climatic limits

A common view about limits, which I think creates more confusion than clarity, is that there are strict environmental and climatic limits "out there" that societies cannot but respect. These ideas about limits on development or growth connect to what was presented as background for the Brundtland report in chapter two, and in particular the report *Limits to Growth* by the Club of Rome in 1972. Such ideas of course also have a history that stretches back even further: many of the classical economists – such as Adam Smith, Thomas Malthus, and David Ricardo – recognised that natural resources were a constraint on economic growth. Let us look more closely at these ideas, and decide whether or not they capture an important meaning of the concept of sustainable development.

One clear example of such a presentation of ultimate limits comes from Robert Costanza and Herman Daly. They have argued that "constancy of total natural capital is the key idea in sustainability of development", and on this basis concluded that "growth cannot be sustainable indefinitely on a finite planet" (Costanza and Daly, 1992, p. 39). If they are right, then maybe the concept of needs and sufficientarian principles of distribution are merely a varnish that covers the real meaning of sustainable development as a steady-state economy (or something akin to that). Their argument is based on a distinction between different kinds of capital. They define capital broadly as "a stock that yields a flow of valuable goods or services into the future" (Costanza and Daly, 1992, p. 38), which allows them to include – unlike

many mainstream economists – not only manufactured goods (of tangible and intangible kinds), but also natural capital. Natural capital is then further divided into renewable and nonrenewable kinds, where the former is defined as self-maintaining and the latter as its opposite. On this basis they present a view distinct from mainstream economics, defined as follows:

> In the past, only manufactured stocks were considered as capital because natural capital was superabundant in that mankind's activities operated at too small a scale relative to natural processes to interfere with the free provision of natural goods and services. Expansion of manufactured and human capital entailed no opportunity cost in terms of the sacrifice of services of natural capital. Manufactured and human capital were the limiting factors of economic development. Natural capital was a free good. We are now entering an era, thanks to the enormous increase of the human scale, in which *natural capital is becoming the limiting factor*" (emphasis added, Costanza and Daly, 1992, p. 39)

Natural capital is a limiting factor, assuming that total natural capital must be kept intact. If we accept this imperative, then there are clear limits to growth, they argue. Given that we must maintain the overall level of natural capital – they are open to there being trade-offs in the sense that losses of nonrenewable capital is compensated for by gains in renewable capital – we must take heed of natural limits, such as the 'carrying capacity' of land and 'sustainable yields'. Their conclusion is that this makes conventional economic growth impossible since it is essentially destructive of natural capital.

But what if we take a step back and ask ourselves about the reasons for caring about total natural capital in the first place? Costanza and Daly recognise the relevance of this, in their words, "valuation issue"; they write:

> [O]ur policy recommendation is based on the perception that we are at or beyond the optimal scale. The evidence for this perception consists of the greenhouse effect, ozone layer depletion, acid rain, and general decline in many dimensions of quality of life. It would be helpful to have better quantitative measures of these perceived costs, just as it would be helpful to carry along an altimeter when we jump out of an airplane. But we would all prefer a parachute to an altimeter if we could take only one thing. The consequences of an unarrested free fall are clear enough without a precise measure of our speed and acceleration (Costanza and Daly, 1992, p. 45).

The only problem is that even if it is we (i.e. the present generation) that jump out of the plane, it is not we who will hit the ground. Maybe the

depreciation of natural capital *should* be a limiting factor in the politics of today – and the evidence actually weighs heavily in favour of that – but it *is* not generally recognised and acted upon as such. If there is such a natural limit to growth and development it is still rather conveniently transgressed in our social practices.

Another instance of talk about ultimate limits, this time more clearly related to the problem of climate change, are the various specifications of 'dangerous climate change'. In chapter one, I presented the general picture of climate change. There we saw how climate change is already underway and has brought about disruption on the climate system. Still, it is the effects in the future that are primarily thought to be worrisome. This creates a need to define a limit on acceptable and unacceptable changes within the climate system. But, as noted in chapter one, it is unclear exactly which changes to the climate system are "dangerous". For such a categorisation to be informative and for it to function as a normative goal, the meaning of 'dangerous' must be specified; in other words, we must know which changes in the climate system we have reasons to deem unacceptable. This is not only, and not even primarily, a scientific question.

But consider first that even if we did assume that a scientific specification was enough we would still face many difficulties. For instance, as highlighted in chapter one, the many uncertainties relating to energy scenarios and climate models. We can now add yet another problem: even if we did have rough knowledge about future greenhouse gas concentrations and about the likely direct response of the climate system to a given carbon stock, we would still have to deal with, what Myles Allen and colleagues have called, a "stabilisation dilemma": "either we specify a temperature or concentration target and accept substantial uncertainty in the emissions required to achieve it or we specify emissions and accept even more uncertainty in the temperature response" (Allen et al., 2009, p. 1164). Due to uncertainties related to climate sensitivity and feedback mechanisms, a definition of dangerous climate change in terms of a temperature target (e.g. 2°C) or in terms of an emission target (e.g., 450 PPM CO_2) may thus be unhelpful. Allen and colleagues have proposed a seemingly better approach, referred to as an "emissions budget". Their idea is basically that humanity is granted a budget of carbon dioxide emissions in the size of one trillion metric tons of carbon for the period between 1750–2500. In order to have a reasonable chance (i.e. 50% chance) of staying behind 2°C, this budget must be respected. Already more than half of that budget is used up, so the rest of it must now be portioned out for the remaining time. Based on emission trends over the past 20 years, we are expected to reach this budget constraint sometime in 2041, that is, in 28 years time. However, this carbon budget approach, just like many other approaches mentioned in

chapter two, is presented as descriptive, and as such cannot fully capture the reasons for action.

The reason why any such scientific approach to the question of limits falls short is because the query is ultimately normative or evaluative. We must decide which changes in average temperature will lead to unacceptable consequences, and that decision is not purely scientific, though it should of course be informed by science. We must also decide, on the basis of an idea of unacceptable outcomes, what probabilities we should accept for such results. In the words of Robert Nozick (1974, p. 74), the question is one of "[i]mposing how slight a probability of a harm that violates someone's rights also violates his rights?" More bluntly: how much (and what probability of) loss of values, suffering and gloom is acceptable in the pursuit of other things of value; at what price should the pursuit of happiness be bought? There is no one right answer to such questions, but there are more or less justified answers. It would be naïve to believe that we could act in ways that do not give rise to value depreciation and harm at all. We are intimately connected to each other and thus are necessarily exposed to mutual influence. Most often, though, this manifests itself under a tacit agreement of reciprocity: I affect you in various ways, but at the same time allow you to affect me in similar ways. Still, even in cases of mutual risk acceptance and good intentions there may be issues of unjustifiable risk transfers. Say, when a person offers another person a ride in his car out of generosity, this act of course may carry a discernible risk of a car accident. In this case they may both deem that the risk is still acceptable, and they may do that for good reasons. However, if the driver, unbeknownst to the passenger, is a reckless one, the risk imposed may indeed be unacceptable. In the real life situation of climate change, things are much more complex.

The idea of defining a limit on climate change in purely scientific terms is sometimes presented through the notions of thresholds and tipping points in the climate system (Lenton et al., 2008; Rockström et al., 2009), but neither does this close the case. The idea is that there are certain points in the climate system, which, if pushed, could give rise to runaway climate change or to self-reinforcing and unmanageable changes. The work on tipping points of the climate system is still in need of further development, as of yet it is far away from providing precise predictions, and leaves much room for uncertainty. This does not make the notion unimportant, but we should be wary that the leeway of uncertainty may give rise to a temptation to keep emissions only just below what may be a critical limit (instead of cautiously keeping them well below). At any rate, we cannot present any clear definition of dangerous climate change on the basis of these factors, much for the same reasons that we cannot do so with the idea of a carbon budget. If we knew

that a certain carbon concentration would lead to the eventual extinction of the human race, the case would be clearer[1], but we are not even close to that state of knowledge at the present time. While the epistemic situation is good when it comes to the general thesis about anthropogenic climate change, we are in a much worse situation with respect to scenarios of future climate change impacts. More importantly, even if we had the relevant knowledge, we would need an argument as to why we should keep a certain distance from the critical limit instead of stopping just below.

Most scholars as well as politicians working on climate change have already agreed that a maximum temperature increase of 2°C is the target. This should mean that this goal is normative for them; that they see reasons to act in ways which prevent a breach of that limit. One could, then, out of pragmatic reasons, take this as pretext to focus on other questions. Such reasoning indeed seems sound; it would be pointless getting stuck on a question which may not even have a determinate answer. In chapter four, in the argument for a satisficing approach to climate justice, I argued in a similar manner. Even so, we should take note of the fact that little concrete reorientation of greenhouse gas generating activities is seen, which can be taken to suggest that this goal is not really normative after all. It could be that the acceptance of the 2°C-target is only paid lip service, as opposed to the conclusion of reflective deliberation.

In this thesis I have tried to provide the outline of an alternative and more reflective approach to the matter. My conviction is that an agent who applies the constructivist approach outlined here, where s/he critically scrutinises his or her reasons from a practical point of view, stands a better chance of successfully addressing climate change. If climate change limits are approached from a more particularised and/or individualised perspective rather than from an overall (and top-down) climate science perspective, any conclusion will at least be normative and motivating from that specific perspective. The question posed on this basis would be something like the following: what does it mean that I know, or strongly suspect, that my personal activities, or the activities I implicitly accept as a citizen of a state, or the ones my consumption gives rise to, have detrimental effects on the environment and consequentially negatively affect future people? What kind of information must I have in order to find reasons to reorient such activities in light of their long-term effects? What are the environmental and climatic limits, as seen from my perspective as an individual/citizen/consumer, that oblige me to act

[1]Though not necessarily clear. A satisfactory analysis would perhaps also attempt to provide reasons for why we should care about the survival of humanity, as opposed to merely asserting this as an unacceptable outcome (Broome, 2010).

differently?

7.3 Social limits

Although the ideas about environmental and climatic limits on development are no doubt important, there are reasons to be hesitant about the role they play in justifying and motivating political action. That is not to say that there are no ultimate environmental limits, there surely are – the clearest example is when a non-renewable resource runs out – but it is debatable whether it is the possibility of breaching these limits that justifies and motivates action in itself. Instead, I would argue, whatever reasons we have to combat climate change must ultimately be related to what we take to be valuable; to what is a reason for an agent. It is not the case that climate change will make it physically impossible for all (though tragically for some) agents to continue their greenhouse gas generating activities; most people could continue to burn fossil fuel long after important climatic limits are passed. But there are good normative reasons for why they should not do that, despite the fact that they can do it. This leads to the conclusion that the most important sense of limits for the present discussion is limits as social constructions.

There are both environmental and social limits on development, but neither should be thought of as discoverable scientific facts that compel us with the force of a natural law in a certain direction. Just like with environmental limits, the relevant sense of social limits on development is as constructions. That does not mean that they are optional or lax. On the contrary, I would even argue that these limits are essential to human life. Martha Nussbaum explains the importance of limits well:

> In general it seems that all forms of life, including the imagined life of a god, contain boundaries and limits. All structures, even that of putative limitlessness, are closed to something, cut off from something – say, in that case from the specific value and beauty inherent in the struggle against limitation. Thus it does not appear that we will so easily get beyond the virtues. Nor does it seem to be so clearly a good thing for human life that we should (Nussbaum, 1993 [1988], p. 267).

More specifically, as I argued in chapter two, normative concepts are best thought of as solutions to practical problems. They are normative from the first-person perspective of a human agent faced with a specific practical problem which they must work their way out of. From this practical point of view various desires, plans, intentions and normative judgements are scrutinised with the hope that a workable and coherent conception will slowly

take form. From this perspective, and this only, will things be normative for an agent; only from here will reasons for doing this or that be recognised and move him or her into action. It is at this junction that we must make our arguments for environmental and social limits on development.

This has also been the ambition of this thesis. The idea about different socially constructed climate limits is the common thread that ties this thesis together. The discussions on the concept of basic needs, about satisficing, about unacceptable risks for future people, as well as those about unacceptable solutions to the problem of climate change can be framed in terms of limits on development. In this interpretation, the different arguments highlight various inherent constraints or limits on the intention to develop; in other words, limits as necessary practical postulates on such future-oriented activities. To engage in development activities in the sense of trying to improve one's own or others' conditions over time is to make various commitments, to recognise limits and conditions of the success of this endeavour. In other words, there are certain limits that are constitutive of development projects – most importantly that they must be made sustainable.

On a general level, this constructivist interpretation can be manifested in the talk about the conflict between aspirations for a better life and the detrimental effects these aspirations sometimes have on other people. Development was broadly defined, in chapter two, as 'future-oriented activities and aspirations reflectively contemplated'. Depending on where you live and what your particular situation is this means different things: for some development is a matter of life and death, it is about finding food and water to survive the day; for others, development is about hope for a better future in either material or spiritual terms. The ambition of this thesis – which I believe I share with the authors of the Brundtland report – is not to moralise about people's aspirations for a better life. Whether it is the desire to have many children in order to secure old age provision, or if it is the desire to own the latest 'smart phone', these are people's choices. If these choices have detrimental effects on other, present or future, people, then there are reasons to re-think and maybe re-orient them, but these reasons must be recognised by those agents themselves. Rather than trying to force obligations on others or dictate what others should do, the approach defended here has been to argue from a first-person point of view for such moral reasons. The argument went something like this: in identifying yourself as a citizen of a nation-state conducting a reflective scrutiny of the basic structure of your society, you will find it unacceptable to participate in activities that contribute to reprehensible climate change effects on future people (whether of your own or of some other nation-state); thus, you will agree to replace such activities with less damaging alternatives, provided that such a reorientation does not threaten

the provision of your own or your fellow citizens's basic needs here and now.

The argument can be thought of as a specification of various values assumed in development activities. The relevant questions are: what are the core values expressed in our attempts to improve our lot within the abode of the Earth? Is there any incoherence to be discovered; do we have reasons to reorient some of our practices? One way in which such incoherence is manifested is as a kind of dissonance. A striking example is the drilling for oil in the Arctic after the ice has melted as a result of a warming climate. A more everyday example comes from Jared Diamond in the following quote:

> Most of us who have children consider the securing of our children's future as the highest priority to which to devote our time and our money. We pay for their education and food and clothes, make wills for them, and buy life insurance for them, all with the goal of helping them to enjoy good lives 50 years from now. It makes no sense for us to do these things for our individual children, while simultaneously doing things undermining the world in which our children will be living 50 years from now (Diamond, 2011, p. 513).

To initiate development projects, plan for the future, make long-term commitments, care for ones children and grandchildren, etc., without thereby also recognising that the effect of greenhouse gases emissions is a threat to these objectives is incoherent: it is best called a moral and cognitive failure. The conflict is not resolved by falling back on wishful thinking, such as techno-optimism or the naïve hope that economic growth will solve all future problems. The stakes are simply too high for such bets to make sense. No one can reasonably and sincerely judge that the threats posed by climate change will resolve themselves.

Instead we must work out the level of precautionary concern that we are committed to in these future-oriented development projects. To begin with we must recognise the need for a decision to act in the first place. In chapter four, I argued that the situation posed by climate change is one in which we should be wary of procrastination. There may be no optimal solution to the problem of climate change, while at the same time the search for one is likely to lead to a worse outcome than necessary. Instead, I proposed, we have reasons to satisfice, in the sense of settling for a sub-optimal, though satisfactory, solution in order to avoid getting stuck in an impasse. From the point of view of a specific society this may mean that it should unilaterally take various cost-effective precautionary measures despite uncertainties about their exact role in mitigating the international and intergenerational problem of climate change. The case is strongest for the implementation of so-called no-regret policies, that is, measures that are essentially costless due to their beneficial side-effects

(e.g., many instances of increased energy efficiency), but can be made more general still. Granted the fact that continued emissions will contribute to detrimental effects on future people, a nation state will in principle have reasons to include climate-related concern in all domestic and international future-oriented projects undertaken. To mention another example: today it does not make sense to invest resources in official development aid without also including climate-related goals (e.g. it would be misguided to finance a coal-fired power plant in a developing country). Another implication of the argument for satisficing – and conversely of the argument against optimal solutions – is that the inaction of others is not obviously an excuse for doing nothing oneself. If climate change action is motivated by an ideal argument for an optimal solution, this argument may not hold given that the conditions for action are altered. If, however, the basis for action is the need to act so as to avoid bringing about an unacceptable outcome, this argument may be equally relevant despite the fact of others' inaction.

The justification for acting now, given a reasonable certainty about the negative impact of continued greenhouse gas emissions, is forthcoming from a practical point of view adopted by a reflective agent. The reason that it does not make sense to participate in climate change-creating activities, if there are reasonable alternatives, has to do with the incoherence that this gives rise to in conjunction with various other generally affirmed normative judgements (e.g. that ones children should lead a good life; that others should have the opportunity to enjoy nature, etc.). The reason is not conditional on an actual or hypothetical agreement, such that noncompliance would dissolve the conditions of a contract. It is only conditional on the adoption of the practical point of view, that is, on the readiness to expose one's values and judgements to a critical review. Finally, one other implication of the defence of satisficing in the context should be mentioned: the choice of a less than optimal solution is not only relevant as a response to those who have argued for further research and development rather than immediate action, it also speaks against those who propose that nothing but a perfect solution to climate change will do. A concrete example may be the opposition to nuclear power: maybe climate change abatement ideally should come only in the form of renewable energy, but as the need for action is urgent and there are political as well as technical constraints, it may be that nuclear opponents have reasons to satisfice in the sense of accepting a good enough solution (at least granted that the risks of nuclear energy are not totally unacceptable in themselves).

The need for action given the stakes raised by climate change forms the basis of a socially constructed limit on development: we must not put off climate change abatement any longer; we must do something here and now

(even if it does not amount to an optimal solution). On the basis of this limit, I proposed that we should understand the needs principle of the Brundtland conception of sustainable development as a suggestion for a good enough solution. That is, as we do not know the exact relation between present day emissions of greenhouse gases and their negative future impact on human well-being, we have reasons to take various precautionary measures with respect to the conditions of future needs provision. If greenhouse gas emissions continue on present trajectories it is likely that our emissions today will contribute to frustration of the basic needs of future people; in other words, if we continue to develop the way we do today, it will be at the price of depriving future people of the same opportunity.

Once this specification of present day greenhouse gas generating activities is done, we can no longer deny the assumptions made, namely the connection to vulnerable future individuals. Once we realise that our actions will have an impact on people just like us, only temporally distanced, we cannot help but include them in the justificatory process. The background to this was fully explained in chapter five, where I argued that the relevant question of intergenerational justice was the following: to what extent are yet non-existent future people reflected in our moral considerations? I argued against different ways of denying their standing all in all, such as attempts to pack future individuals together into faceless collectives or attempts to present an over-idealised picture of future individuals as invulnerable to harm. Still, we must concede, future individuals figure differently than present and existing individuals do in our justificatory deliberation. Even if we do not lack connection to future individuals, it is less pronounced and intrusive than is our relation to contemporaries. For a constructivist this makes a moral difference as normative requirements are ultimately a function of our values. That is not to say that since people display little concern for future people they are justified in that practice – no, we can indeed be mistaken. But we should still expect the concern for future people to be less than that for present people, even when we reflect clearly and are fully informed about the situation. There are exceptions to this: individuals that are more attuned to the well-being of future individuals than others, but such wholly temporally neutral individuals are extraordinary. Generally, our moral requirements will be less extensive in our intergenerational than our intragenerational relations. On this basis I proposed that an intergenerational needs-principle could be vindicated as a minimal requirement in light of the conditions witnessed.

7.4 Anticipatory Climate Justice

The conclusion presented so far should not be read as based on invariable facts of human nature; there is clearly room for moral progress. Given this, the approach defended can be thought of as 'anticipatory climate justice'. The idea being that in the absence of a perfect theory about the intergenerational and international distribution of the climate change burden, there could still be points of certainty and convergence that allow us to anticipate any more ideally just distribution. The idea builds on the work of Gopal Sreenivasan, and his proposal of an interim distribution of development aid as a response to health deficiencies in a non-ideal global order (Sreenivasan, 2007). Sreenivasan argues that "any plausible and complete ideal theory of international distributive justice will minimally include an obligation on the richest nations to transfer *1 percent* of their GDP to the poorest nations" (Sreenivasan, 2007, p. 221). Similarly, I have argued that any reasonable theory of intergenerational and international climate justice will minimally include an obligation not to meet non-basic needs in ways that compromise the ability of future people to meet their basic needs.

This sense of nonideal theory is somewhat different from the standard accounts mentioned in chapter one. We noted there, following Rawls's introduction of the distinction, that it is common to distinguish ideal from nonideal theory by whether a general compliance with the principles issues is assumed or not. However, I also mentioned, at the very end of chapter one, an idea from Ingrid Robeyns which is more in affinity with anticipatory justice, namely the idea of a partial theory of justice. The parallel thought is that we are sometimes able to specify an imperfect or incomplete theory of distribution even though we lack resources to perfect it. If this is true, then it may not be the case that nonideal theory presupposes ideal theory, at least not in the sense of a complete or comprehensive specification in a fully general form. As Sreenivasan argues, we could...

> define targets for practical action *before* a complete ideal has been worked out, even in outline. Furthermore, if our assumptions about the minimum demands of justice are defensible, we can be confident that steps towards these targets are steps in the right direction (Sreenivasan, 2007, p. 221).

Sreenivasan argues that we do not need to know which ideal theory is the best, or the one that eventually will be proven correct, in order to make gradual improvements here and now. On the constructivist conception from which we have worked, the talk of a "best" or "correct" theory may not be fully comprehensible, but the point still carries: even if we are not in a position

to fully resolve all normative disagreement in relation to climate change, we can anticipate steps in the right direction that will be taken no matter which comprehensive doctrine will be more influential over time. We should add, though, that this does not necessarily prove Rawls wrong about the priority of the ideal over the nonideal. We might as well think of the anticipation as affirming "that enough of ideal theory is settled [so] that we can already begin to derive from it (together with our social-scientific knowledge) the rudiments of nonideal theory" (Simmons, 2010, p. 36). Call it what you like: a possibility of an "overlapping consensus" (Rawls, 2005 [1993]); an "incompletely theorised agreement" (Sunstein, 1994); a partial or nonideal theory of justice – the underlying idea is simple enough: there is sufficient consensus on certain basic moral considerations for us to have reasons to act on that basis here and now.

The claim thus is that even though there is great disagreement on questions about what we owe to future people in virtue of climate change, and on what residual duties there are in relation to contemporaries globally, there are also points of practical convergence. We all reasonably affirm moral reasons not to engage in future-oriented activities that risk undermining the conditions of their success, that is, that present unreasonable risks on the provision of basic needs over time. Another point of certainty is that we cannot discharge this obligation in ways that prevent the provision of basic needs here and now.

Is there any way in which even this basic needs principle, as applied to the climate change context, could come out as too demanding? In other words, are there any reasonable theories of international or intergenerational justice that would have legitimate complaints against this proposal? I believe not. There is no way in which this minimal principle is too demanding, and in extension there is no reasoned way of resisting its conclusion. The only way in which the intergenerational and international needs principle could be considered unreasonable is if one does not recognise these settings as giving rise to any moral requirements whatsoever. That would be the position of a hard-core communitarist with a present moment time-bias, if that is at all meaningful. I have argued that as actions have consequences on spatially and temporally distanced others it is not possible to coherently deny those others in the justification process. The time-biased communitarist would have to isolate him/herself, or at least lead a life in deep denial and dissonance. Any more reasonable position – be it egalitarian, prioritarian, Rawlsianism, utilitarianism, humanitarianism, or even libertarianism – would recognise that if an action is conditioned on the creation of an imminent risk to another human being, then the perspective of the subjected person must be included in the justification of said action. As was argued in chapter six, above the absolute prohibition against trading off the conditions for

meeting needs presently, a multitude of other considerations are relevant to the question of distributing responsibility for addressing the problem. It was argued that over and above the needs principle, historical responsibility, unjust benefits as a result of transgenerational free-riding, investments made, efficiency, among other considerations are relevant in the sense that they are points that legitimately can be raised by negotiating parties, and cannot be dismissed in order to secure a stable agreement over time.

A similar result is also forthcoming when the question is posed from a bottom-up rather than top-down perspective: from opinion polls. One could, for instance, mention a study on the perception of climate change risks by the U.S. public, conducted by Anthony Leiserowitz (2006). This study was based on the hypothesis that affective images of global warming as well as different cultural values would influence the risk perception of climate risks. Four ideal types, gathered from cultural theory, were used to categorise four broad "worldviews": the hierarchical, the fatalistic, the individualistic, and the egalitarian. Leiserowitz shows how these explain much of the differences in risk perception and preferences for different policy responses, but also finds some more consistent results: "Americans as a whole perceived global climate change as a moderate risk" (Leiserowitz, 2006, p. 52); and: "The moderate level of public concern about climate change [...] appears to be driven primarily by the perception of danger to geographically and temporally distant people, places and non-human nature" (2006, p. 52). One interpretation of this result is that even though the four types of worldviews differ in perception of and response to climate change, there is a point of convergence on the need to avoid certain types of climate risks. People also strongly supported greenhouse gas mitigation policies, including both unilateral action from the U.S. (76%) and support of the Kyoto protocol (88%). An interesting contradiction, though, was found between this moderate, though clear, risk perception, on the one hand, and a clear opposition to policies with direct personal impact, such as changes of consumer behaviour from gasoline taxes, on the other hand. Leiserowitz argues that...

> this suggests that, as a whole, the American public is currently in a 'wishful thinking' stage of opinion formation [...], in which they hope the problem can be solved by someone else (government, industry, etc.), without changes in their own priorities, decision making or behavior (2006, p. 63).

Another interpretation of this incoherence is that it suggests that there are reasons for people to re-think and maybe re-orient their individual life style patterns, alternatively to revise their opposition against green taxes. Finally,

in this connection, one can also note that since 2008 several opinion polls have consistently showed how the public concern for climate change has decreased. Lyle Scruggs and Salil Benegal argue that the best explanation for this trend is the economic recession since 2008 (Scruggs and Benegal, 2012). If this is right, then it might reinforce another point argued for in this thesis: if the concerns of climate change are seen as being in competition with the provision of basic needs (for instance, in the form of social security, opportunity to work and keep ones house, etc.) here and now, it may be perceived as unreasonably demanding.

Leiserowitz's study, together with other studies that he cites, supports the general approach defended here. Climate change risks are socially constructed, highly dependent on different values and normative judgements affirmed by people. To repeat: we should not take that as a sign that we should give up the search for unison and objective solutions, although we should take it to suggest the need for more tailored arguments receptive of particular audiences. We should of course be very careful in the conclusions we draw from polls and more generally from expressed values. Let the cautious conclusion here only be that when people are not preoccupied worrying about their day-to-day lives, they will at least express a moderate concern for the impacts of greenhouse gas generating activities on temporally and geographically distanced others, as well as support abatement policies (at least as long as they are not perceived as a direct threat against individual lifestyles). Together with the conclusions above, we can conclude that the needs principle by which we make development sustainable is not overly demanding.

But is it maybe too minimal? I have argued that we are *at least* required to not create unacceptable risks on the provision of the needs of others in our development activities. The basic needs of all affected parties are a moral constraint on the pursuit of our aspirations today. Now this conclusion may not seem revolutionising, and neither should it – the very idea has been to present a minimal standard beyond dispute. Still, the arguments of both chapter five and six provide the grounds for drawing out quite far-reaching implications of this basic requirement. The moral limit not to risk the basic needs of all those affected by one's action – or, in cases where it is relevant, all those affected by one's joint contribution – is no small thing.

That this is so is most clearly seen when comparing the norm of sustainable development to the commonly discussed idea of sustained growth over time. If sustainable development were to mean simply sustained economic growth, then there would be no obvious case for addressing climate change as long as it was not a threat to the total economic productivity. The needs principle, by contrast, does not allow for trade-offs in the sense that some people's needs are sacrificed for the sake of maintaining an overall balance of economic activity.

This means that it is not enough that the world economy is constantly growing, what matters with respect to our bequest to the future is not the total level of productivity or wellbeing but the minimum level. We are obliged to evaluate present day development activities not in relation to their effect on overall wellbeing, but from the perspective of the worst off future people. That makes a world of difference.

When it comes to climate change mitigation, to prevent unacceptable risks on future peoples basic needs is as far-reaching as the most radical alternative proposals when we look at the concrete policy side. The requirements of sustainable development are not insignificant, futile or lax; in order to avoid passing on unacceptable risks to future people we are obliged to reorient the economy as a whole. If the conditions for meeting basic needs should persist over time, then climate change must be prevented, which means soon curbing further greenhouse gas emissions. The case is different from one of resource management where each resource left unexploited is an additional saving for the future; in the climate case, if we secure the basic conditions needed to provide for basic needs in the future, we will have done everything that can be done with respect to climate change. It is not the case that we could do better by further savings. The concrete application of a nation state adopting the needs-principle, making their development sustainable, is to in so far as possible shift to alternative energy sources and minimise greenhouse gas emissions. This requirement is quite far-reaching, but without meeting it we cannot develop at all on our limited Earth.

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