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## 1 Introduction

The world is facing a grave threat due to climate change, and we are totally aware of it. According to the climate scientists, we have to reduce the climate gas emissions globally by 40-70% within 2050 in order to achieve the two degree target<sup>1</sup>. This target has been set as a limit in order to avoid the worst hazards caused by global warming (IPCC 2014, 20). However, this is not a problem that suddenly appeared on the agenda: the policy makers have explicitly pursued to come up with a solution to the problem of climate gas emission for more than 25 years. The policy makers have endeavoured to obtain a sustainable development in order “to ensure development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (UN Documents 2015?) Despite, their effort, though, the CO<sub>2</sub> emissions have increased with 54 percent from 1990 till 2013 (IPCC 2013, 6). Hence, the strategy of the policy makers has not yet affected practical politics with any significant force.

My initial claim is therefore that there is a gap between the policy makers' articulated effort in order to solve the climate problem and the factual empirical data showing that the climate gas emissions are continuously increasing. It is common to address the disappointing results through the factor of human motivation and will. The notion is that the politicians and the public, for some reason, prioritize more short sighted goals than the concern about climate change. For instance, the German philosopher Dieter Birnbacher (2015, 6) asserts that it seems difficult for the present generation to act upon a moral obligation to future generations. The Norwegian psychologist Per Espen Stoknes (2014) describes the problem in a slightly different way. According to him psychological obstacles override rational reasoning and hinder us from taking sufficient action. Hence, the problem has to be overcome by certain motivational means (Stoknes 2014, 168). However, my claim is that the approach towards human will and motivation is not enough in order to solve the climate problem. According to my understanding of the problem, the climate problem should rather be addressed through an examination of the different world views that are involved in the dispute about climate policies. This notion is supported by the contemporary debate about how the climate crisis can be solved where different world views seem to be a vital aspect. The core dispute in the present debate is concerned with what status economic growth should be granted: it is a fight

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<sup>1</sup> The global temperature should not rise more than two degree Celsius measured against the pre-industrial temperature level.

between two different world views, where one view holds that economic growth is a part of the solution, while the other believes economic growth *itself* causes the climate crisis.

The ‘growth economic’ world view is often labelled Weak Sustainability, while the ‘growth opposing’ one is called Strong Sustainability (Neumayer 2013, 1). According to the economist Eric Neumayer, the solution to the climate problem circles around this distinction. It is, he argues, required to discuss and assess the content of these two opposing world views in order to come up with effective climate policies. This claim is supported by the persuasive theory of Joachim Spangenberg (2015). He, moreover, argues that it is vital to distinguish between *moral ideals* and *world views* in order to solve the climate problem. The moral ideals do not comprise all of the factors that decide how we and the policy makers act in the case of climate change, he claims. According to him a world view represents “the ontology held by decision makers (...) which is determining the practical conclusions from moral principles and ethical attitudes” (Spangenberg 2015, 127). The point is that people can share the same ideal values but at the same time adhere to conflicting world views which rely on substantially different practical means. Hence, both adherents of the world view of Weak Sustainability and Strong Sustainability most likely follow the same moral ideals.

Furthermore, Spangenberg alleges that the factor of world views is under-communicated in the present discussions about climate policies. Both he and Neumayer criticize the contemporary debate about climate policies. In their view, the policy makers fail to recognize the crucial role of world views. According to them, the policy makers have to discuss and compare the world views of Weak- and Strong Sustainability in order to solve the climate problem. The main aim of this master’s thesis is to find out whether the factor of world views can explain the alleged gap between the policy makers' articulated effort to solve the climate problem and the factual empirical data showing that the climate gas emissions are continuously increasing. Moreover, I shall examine whether the approach of Spangenberg and Neumayer hold the key to effective climate policy making.

First, I examine the approach towards world views through empirical examples. My intention is to test the claim of Spangenberg and the other theoreticians, who deem the present debate about climate policies to be deficient. Examples from the Norwegian political context, though, underpin the notion of Spangenberg: a huge majority of the policy makers are not taking the aspect of different world views into account at all. The policy makers are

largely biased towards the world view of growth economy and Weak Sustainability and do not discuss the content of the conflicting world view of Strong Sustainability. The dominant world view seemingly overrides the viewpoints of the opposing world views.

Lastly I shall critically examine the premises of the dominant world view of Weak Sustainability. I shall find out whether the policy makers are entitled to pursue the world view of Weak Sustainability with such confidence: are their position supported by valid arguments? I am using the theories of Tim Jackson and Anders Arvesen et. al. to assess the widely pursued climate policy strategy of Green Growth, which reflect the dominant world view of Weak Sustainability. They provide a thorough and credible examination of the practical means of the strategy and do furthermore evaluate whether the strategy can obtain the required emission mitigation targets. Both come to the same conclusion: the policy strategy of Green Growth is a dubious course, which most likely cannot reduce the climate gas emissions to the required extent.

Additionally, I shall also examine the aspect of moral ideals, which accompanies the factor of world views. The adherents of the two opposing world views of Weak Sustainability and Strong Sustainability are, despite of their differences, seemingly motivated by the same moral ideals to act upon the climate problem. An important question to examine in this regard is whether the moral ideals offer some guidance in respect of *which* world view the policy makers should pursue. My claim is that the policy makers' quest for a sustainable development and the obligation towards future generations are most likely motivated by the foundational values of liberal democracies. According to my line of thought, the policy makers are seemingly adhering to a moral ideal that consists in the values of freedom, equality and the connected human rights. Furthermore I will argue that the values of democracy entail a strong emphasis on the factor of rational and reasoned discussions and further suggest that, *if* the notion of Spangenberg and Neumayer about world views is correct, the policy makers may be failing to act in accordance with the moral ideal of democracy that they seemingly adhere to. The line of thought is as follows: Spangenberg and Neumayer claim that the policy makers in the present discussions leave out the crucial aspect of world views. Thus, if their claim is correct, the policy makers fail to take the best reasoned arguments into account, and they are therefore breaching the moral ideal of democracy. In addition to the utilized literature this master thesis is developed with help from unused

sources<sup>2</sup>.

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<sup>2</sup> (Butler 2012, Des Jardins 2006, Gardiner 2011, Kallis 2010, van den Bergh 2010, von Wright 2009)

## **2 Background**

My initial claim is, as already mentioned, that there is a gap between the policy makers' articulated effort in order to solve the climate problem and the factual empirical data showing that the climate gas emissions are continuously increasing. Seemingly, the majority of the political sphere, agree that we are obligated to solve the climate problem. Moreover, the policy makers of UN and the national governments, seemingly, have endeavoured to come up with policies that can deal with the problem for more than 25 years. The aim of the policy makers is first and foremost a result of the sustainable development strategy of UN which entails the alleged solution of Green Growth. The intent of the strategy is to “make development sustainable to ensure development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (UN Documents 2015?). However, still, after 25 years of work with new climate policies, their effort has not resulted in the desired reduction in climate gas emissions. The inconvenient truth is that the climate gas emissions are still increasing in a stable tempo. Something is obviously wrong. In order to come up with an answer to this problem I shall start with an examination of the history behind the sustainable development initiative.

### ***2.1 What is Sustainable Development?***

Sustainable development is an immensely popular term, used in a widespread range of settings. The German economist Eric Neumayer points out accurately the status of the concept: «[T]here has been hardly any politician, academic or businessperson who does not call for making development sustainable» (Neumayer, 2013, 1). Furthermore, Neumayer considers SD as fundamental as peace and freedom. Rational people will not contradict these concepts, is his claim. *Development* has surely positive connotations, and it seems nearly self-evident that the development has to be sustainable, Neumayer continues (2013, 1). He provides a meaningful notion of the intuitive character of the content which SD consists of. In a condensed form the message of SD is not to use more than the earth's eco-systems can bear. The argument sticks to a simple logic of survival, which rational actors for obvious reasons seem to understand. The point is that most of us recognize the embedded core meaning of SD and actually *do* adhere to its message. And people *do* largely understand the problem and why policy makers stress to obtain SD.

However, it is necessary to make a distinction between the intuitive experience of the concept and the theoretical concept as developed by UN, which has guided the policy makers

through two decades. The theoretical concept should be considered as a theoretical framework with a certain set of premises. Furthermore it has a distinct objective, and a certain strategy for *how* the objective can be achieved by means of policies.

The concept of sustainable development (SD) was created because the policy makers of UN realized that the old view of development, which was defined as *economic* development, led to environmental deterioration and social injustice. At the Conference on the Human Environment in 1972 UN and the policy makers acknowledged that there is a connection between economic development and environmental degradation that has to be addressed. “Little, however, was done in the succeeding years to integrate environmental concerns into national economic planning and decision-making” (United Nations 1997). However, the environmental problems, such as destruction of natural resources and global warming, were amplified through the seventies and UN was forced to take further action. In 1983 UN set up the World Commission on Environment and Development, which was led by Gro Harlem Brundtland (United Nations 1997). The so called Brundtland report, 'Our Common Future' (UN Documents 2015?), which was published in 1987 sought to create a sustainable development for the world.

Before 1987, the view of development was defined solely in terms of economy. Conversely, the idea of the new concept was, not surprisingly, that the world needs a renewed attitude towards development in order to be sustainable. This strategy implies that development cannot solely be equalled with economic growth any more. Environmental and social concerns have to be embedded in the concept of development, according to the report (UN Documents 2015?). The synthesis of the three equal elements of environment, economy and social factors is considered as the groundwork of sustainable development (FN-sambandet 2013). The environmental part involves preserving of species and mitigation of climate gas emissions. The social part of the concept is mainly about eradication of poverty through education and better health services (FN-sambandet 2013).

UN and UN's Environmental Panel, hereafter referred to as UNEP, have since the Brundtland Report sought to create a sustainable development for the world. Furthermore, the concept accompanied the severe concerns about the environment that were the topic of the World Summit on Environment and Development in Rio de Janeiro back in 1992. The outcome of the meeting was a document called 'Agenda 21' that consisted in several actions



that should be the first practical steps towards sustainability (United Nations 1997). The document was accepted by all of the 172 countries that participated, and people seemed to believe this was the outset of a new course.

The sustainable development strategy of UN also endorses the growth economic ideas. The original strategy of sustainable development holds that there are no limits to economic growth and that the carrying capacity of the ecological resources can be stretched by technology (Dryzek 2013, 156). Although the UN's Brundtland commission about sustainability states that there are some ultimate ecological limits, the basic principle of this position is that the limits can be stretched. Gro Harlem Brundtland states that "[l]imits are indeed imposed by the impact of present technologies and social organization on the biosphere, but we have the ingenuity to change" (Dryzek 2013, 156-157). UN has the recent years launched the Green Economy initiative, which is a supplement to the sustainable development strategy. According to UN's Environmental Program, UNEP, "the concept of a green economy does not replace sustainable development; but there is a growing recognition that achieving sustainability rests almost entirely on getting the economy right" (UNEP 2011, 17). The aim of this initiative is to break the link between environmental bads and economic good (UNEP 2011b, 14). 'Economic good' means economic growth. Economic growth is considered as necessary mean in order to promote well-being to the society and lift more people out of poverty, which is a co-objective of the sustainable development strategy. The intent of the green economy initiative is therefore to break the link between economic growth and environmental bads and create a green growth.

However, since the meeting in 1992 the climate gas emissions have continued along the same path, and are continuously increasing rapidly (IPCC 2013, 30). The Inter Governmental Panel on Climate Change's (IPCC) report from 2013 indicates that SD's vision has not yet affected practical politics with any significant force; the CO<sub>2</sub> emissions have increased with 54 percent from 1990 till 2013 (IPCC, 2013, 6) Moreover, the Climate Panel (IPCC), which is constituted by UN and the World Meteorological Organization, has launched five acclaimed reports since 1990 which have provided the policy makers with an increasing amount of information and warnings about climate change and its relation to human activity (IPCC 2015?). According to the last report, masses of people living in high risk areas are already threatened by a destabilization of the climate that is caused by the

collective human activity. For instance, the report shows how a rise in the temperature will increase the impact from grave climate extremes such as droughts and floods and, furthermore, undermine food security and renewable water supplies (IPCC 2014, 8,14) Moreover, the report alleges that these threats will most likely strike harder in under developed and poor regions compared to rich areas (IPCC 2014, 15-16). Hence, the results of the UN strategy, including a row of world summits through the last 25 years, are evidently disappointing.

## ***2.2 What has Gone Wrong?***

My aim here is therefore to discuss what has gone wrong. A common explanation to the problem is that there is a lack of will and motivation among policy makers. Furthermore, it is common to assert that there is a lack of moral engagement with respect to the climate problem. My claim, though, is that this is not a satisfying explanation. From my point of view climate change and the quest for sustainable development have actually been a prioritized task among policy makers for more than 25 years. This notion is supported by the fact that several high profiled world summits have been arranged through this period. Furthermore, a more trivial and illustrative example, which underpins my anticipation, is the fact that ‘sustainable’ has become one of the buzzwords of our times.

It is commonplace today to stick the word ‘sustainable’ in front of almost anything, to talk of ‘sustainable development’, ‘sustainable transport’, sustainable housing’, ‘sustainable communities’ and so on. (Lexicon, 2009)

‘Sustainable’ is considered as a positive word which is pursued by a wide specter of branches within the society, is the claim of the report from the Centre for Policy Studies in London. However, the report does also claim that the widespread use of the concept has deprived the word of its original meaning. From my point of view, though, this assertion is just partly correct. On the one hand I agree with the authors that the word is to some extent cynically utilized for the purpose of promotion. On the other hand, though, I believe most of the people and policy makers still understand the intuitive message of sustainable development, which in a condensed form promotes the idea of *not* using more than the earth’s eco-systems can bear. My point is that, despite of the uncritical use of the word, the policy makers’ effort the last 25 years has at least established sustainable development as a

mainstream concern of our society. I support the view of Eric Neumayer, who considers the concept of sustainable development as fundamental as *peace* and *freedom*: which are concepts rational people will not contradict.

My assumption is that the policy makers and people in general understand the content of the concept sufficiently. Hence, the society is seemingly already familiar with the concept. This indicates that the effort of the policy makers have actually led to a change in the opinion: the public does at least consider sustainability as a concept with positive connotations. Lastly, I believe most of the policy makers that work with climate policies actually want to obtain a sustainable development: their effort is not just for show. My assertion is therefore that the problem cannot solely be reduced to a question about motivation and will.

### **2.3 World Views**

According to my understanding of the problem, the climate problem should rather be addressed through an examination of the different world views that are involved in the dispute about climate policies. This notion is supported by the contemporary debate about how the climate crisis can be solved where differing world views seem to be a vital aspect. The core dispute in the present debate is concerned about what status economic growth should be granted: it is a fight between two different world views, where one view holds that economic growth is a part of the solution, while the other believes economic growth *itself* causes the climate crisis.

The world view of growth is the dominant view, though: throughout the last 25 years the policy makers have followed a course that considers economic growth as a part of the solution. In other words, it is the growth economic rationale that has formed the basis of this, up till now, unsuccessful strategy towards a solution to the climate problem. However, despite the lacking results, an overwhelming majority of the policy makers still adhere to, and prefer the conventional strategy of growth. A prominent proponent of this world view is for instance the Norwegian Prime minister Erna Solberg. «We *know* that climate and economic growth can go together», she stated in her annual New Year speech of 2015 (Regjeringen 2015, my italics). However, the opposing world view, which is fronted, among others, by the acclaimed economist Tim Jackson (2009) believes the strategy of growth is founded on dubious premises and is therefore not suited for the task. The claim is that growth as such has to be addressed in order to solve the problem. “Unless growth in the richer nations is

curtailed, or some kind of completely unforeseen technological breakthrough happens, the carbon implications of a shared prosperity are truly daunting to contemplate” (Jackson 2009, 85-86). Hence, this world view holds that the growth economy has to be replaced by a new economy which dismisses the premise of continued growth.

In order to examine the factor of world views further it is helpful to use the theory of Joachim Spangenberg (2015). In the article *Ideology and practice of the 'Green Economy' – World views shaping science and politics* (2015) he alleges that the aspect of world views is the key element to discuss in order to solve the climate problem. The aim of his article is to demonstrate the difference between Green Economy, which is another tag of Green Growth and the view of Solberg, and Ecological Economy which represents the opposing ideas, of for instance Jackson, which consider growth as such to be problem. According to him it is vital to make a distinction between ‘moral ideals’ and ‘world views’. It is not sufficient to describe individual and political behavior in the light of moral ideals solely, Spangenberg asserts.

[I]t is not only ideal principles that determine which motivation to act results from them, but also the world view, the ontology held by decision makers (...) which is determining the practical conclusions from moral principles and ethical attitudes. (Spangenberg 2015, 127)

The point is that people can share the same ideal values but at the same time adhere to conflicting world views which rely on substantially different practical means. For instance, the world view of Green Growth, which Solberg adheres to, endorses policies that rely on commodification of nature and on technology which is not yet available, claims Spangenberg. Conversely, the opposing world view of ecological economics, which for example encompasses the growth critical ideas of Jackson, considers the economy as a subsystem of the ecology (Spangenberg 2015, 127). However, the point is that in spite of the conflicting world views, both of the positions are most likely adhering to the same moral ideals. Both are trying to address the concern of sustainable development, and hence, they are seemingly obliged and motivated by the same moral ideals which grant future generations the same opportunities as the present generation. The intriguing implication of this claim, though, is that the content of the policies that are launched in order to meet the demand from the moral ideals varies substantially between different world views. Spangenberg alleges that the aspect

of world views is under-communicated in the ongoing debate about climate actions. According to him, in order to come up with a sound solution to the climate problem it is not sufficient solely to discuss moral ideals and motivation. It is crucial to explicitly discuss the aspect of world views, is his claim.

Spangenberg's allegations about world views are not unique, though, and are for instance supported by the work of Jeroen C.J.M. van den Bergh and Ruud A. de Mooij (1997) and John S. Dryzek (2013). They share the basic assumption of Spangenberg of two opposing world views, but do also launch other variations of the two views. The starting point of van den Bergh and de Mooij is that there is a range of different perspectives on how the aspects of economy, growth and the natural environment relates to- and interact with each other. Their claim is that the parallel perspectives, or *world views* in the terms of Spangenberg, have created a state where people do not speak the same language (van den Bergh's and de Mooij 1997, 8). Furthermore, they make a distinction, similar to Spangenberg, between perspectives that reconcile economic growth with the aspect of environmental conservation *and* perspectives that reject this idea. John S. Dryzek approaches the aspect of world views through *environmental discourses*. "Discourses construct meanings and relationships, helping define common sense and legitimate knowledge" (Dryzek 2013, 9). Hence a *discourse*, in Dryzek's terms, is a shared set of assumptions that decide how we cope with the world, which corresponds with Spangenberg's definition on *world views*. Similar to the view of van den Bergh and de Mooij, Dryzek asserts that it is hard for people adhering to one discourse to spot, and understand, the view of another discourse. For instance if you consider economic growth as the main premise for human development, it is hard to comprehend the world view of Tim Jackson, which deem growth economy as the main threat to the climate. However, it is nevertheless always an option to step back and compare and assess opposing discourses, Dryzek emphasizes (2013, 22).

Furthermore, Dryzek describes the two world views on growth, which are present in the contemporary debate about climate policies, through two different discourses. According to Dryzek's line of thought the world view that consider economic growth as a part of the solution, which Spangenberg labels *Green Economy*, takes part in the *discourse of sustainability*. As already mentioned, the partakers of the discourse of Sustainability believe that there are no limits to economic growth and that the carrying capacity of the ecological

resources can be stretched by technology, says Dryzek. Although the UN's Brundtland commission about sustainability states that there *are* some ultimate ecological limits, the basic principle of this discourse is that the limits can be stretched, alleges Dryzek. Brundtland also states that “[l]imits are indeed imposed by the impact of present technologies and social organization on the biosphere, but we have the ingenuity to change” (Dryzek 2013, 156-157). Thus, a premise of the sustainability discourse is that humans hold a creative capacity to overcome any arising problem by technological means.

Van den Bergh and de Mooij describe the same world view of growth, which Spangenberg labels *Green Economy* and Dryzek labels the *discourse of Sustainability*, through two similar perspectives: 'the technocrat'- and 'the optimist' perspective. The technocrat perspective deems growth and environmental concerns as compatible variables. Non-renewable resources can be replaced by renewable capital, and technological development will lead to less resource use and environmental damage, is the view of this perspective (van den Bergh & de Mooij 1997, 5). This perspective is based on an assumption of technological human ingenuity, similar to the content of Dryzek's discourse of Sustainability. Hence the prediction of this perspective is a hyper-technological world, assert van den Bergh and de Mooij. The assumption of the *optimist perspective* is that growth is necessary for environmental conservation. According to the adherents of this perspective, the demand for polluting goods will drop when people change their attitude towards the environment, van den Bergh and de Mooij assert. They believe economic growth is necessary to evoke people's consciousness about nature and the environment (van den Bergh & de Mooij 1997, 7). The most optimistic people in this category also allege that “growth is an imperative for environmental preservation as it enforces the public support as well as financial means for stringent environmental policy” (van den Bergh & de Mooij 1997, 6).

Conversely, the world view that believes growth itself causes the climate crisis, such as Tim Jackson, fall under the 'Discourse of Green Politics', alleges Dryzek. Firstly, as opposed to the Discourse of sustainable development, the adherents of this discourse recognize ecological limits. The acknowledgment of limits is considered as a premise in order to come up with effective climate action policies. Furthermore, according to Dryzek, the partakers of this discourse believe that environmental problems, as the climate crisis, only can be solved by a political structural change (Dryzek, 2013, 218). Unlike the Discourse of

sustainable development, though, this discourse rejects the transforming capacity of technological development. Instead, it considers the relation between human and nature to be more equal. The human role should be more like a stewardship, according to Dryzek. This discourse coincide with *the pessimist perspective* of van den Bergh and de Mooij, which holds that economic growth lead to an irreversible degradation of environmental constituents. This perspective is also pessimistic about the technological potential (van den Bergh & de Mooij 1997, 4). The *immaterialist perspective* contests the world view of growth from another angle. According to this perspective growth does not coincide with a rise in welfare or wellbeing. The notion is that continued growth does not necessarily fulfil the goals we strive for as individuals and communities (van den Bergh and de Mooij 1997, 4).

The theories of Spangenberg, Dryzek and van den Bergh and de Mooi have elucidated what world views consist in *and* furthermore how this aspect seemingly complements the factor of moral ideal in the case of climate policies. Their theories imply that there is not just one way to discuss the climate problem: there are several, and all of the world views, with their connected assumptions, believe they have the answer to the climate problem. In other words, there are constantly different world views, with different assumptions about the world, into play in the present debate about climate policies. The point is that different foundational assumptions lead to different 'true' answers. An example is the pursued policy strategy of Erna Solberg, which explicitly adheres to the premises of growth economy. This world view of growth entails particular assumptions about for instance technology development and the transforming role of the growth economic system, which are decisive for the formulation of policies. The point is that the growth critical world view of Tim Jackson and similar, would have launched substantially different policies, if they had the opportunity. They believe the policies of the world view, which Erna Solberg adheres to, are flawed.

I have given an account for the two dominating world views in the present debate about climate policies. Spangenberg, Dryzek and van den Bergh and de Mooi theories has demonstrated that the two world views consist in two opposing sets of assumptions about the world. Furthermore, the examination has demonstrated that there are variations within the each of the two worldviews. However, the different viewpoints within each of the two opposing world views agree upon the central assumption about growth, or the rejection of growth. The dominant view, with all its variations, among the policy makers holds that

economic growth is a part of the solution, while the opposing view believes economic growth *itself* causes the climate crisis. The point is that despite of all of the variations about the two world views presented by theoreticians, the main conflict, or difference between the two world views seemingly boil down to conflicting views of the aspect of economy. The field of economics offers an explanatory theory which illuminates this crucial distinction.

#### ***2.4 Weak and Strong Sustainability***

The previous sections suggest that the key dispute concerning the climate problem circle around two divergent views on economy. In the further examination of the subject I choose to label the two world views ‘Weak Sustainability’ (WS) and ‘Strong Sustainability’ (SS). The terms are derived from the field of economy. The German economist Eric Neumayer examines the distinction between the concepts in his book *Weak versus Strong Sustainability – Exploring the limits of two opposing paradigms* (2013). He provides an accurate description of the subject which illuminates the distinction between these two prominent world views. According to him WS comprises the conventional world view of growth, which contains the strategy of Green Growth, which Erna Solberg adheres to. Furthermore, WS encompasses all of the before mentioned variations of the world view of growth: green economy, the discourse of Sustainability, the Optimist perspective and the Technocrat perspective. Conversely, SS encompasses the world views that contest the principle of growth, like the position of Tim Jackson, and all the growth opposing worldviews presented by Spagenberg, Dryzek, and van den Bergh and de Mooi.

Sustainability has become a major factor in the contemporary field of macro economy, and has to a large extent replaced the conventional neoclassical approach. WS and SS both adhere to the same definition of Sustainability, but do, as already mentioned, represent different views on *how* sustainability can be achieved. The crucial difference between the theories of WS and SS *and* the preceding neo-classical economic theory, which has been the standard within economic theory the last decades, is the introduction of the factor 'future generations'. Within the field of economy sustainable development is defined as “per capita welfare should not be declining over time”. According to this principle the economy will provide a sustainable development as long as future generations are granted at least the same amount of capital available today. Although a broad range of economists adhere to this view, there is, as already mentioned, one major disagreement left about growth.



Weak- and Strong Sustainability is distinguished by their view on natural capital. The former believes natural capital can be substituted by human-made capital, the latter rejects this stand.

In this context 'capital' is considered as a stock that provides utility, now and in the future. Furthermore, 'natural capital' represents the totality of nature. The totality contains non-renewable and renewable resources, plants, species, ecosystems etcetera, which can provide material and non-material *welfare* to us (Neumayer 2013, 9). 'Man-made capital' is often referred to as just 'capital', this is man-made stuff such as factories, machineries, infrastructures and so on. Weak Sustainability (WS) holds that natural capital can be substituted by human-made capital, Strong Sustainability (SS) rejects this notion. Furthermore, the distinction between WS and SS boils down to a dispute about limits. WS believes there are no physical limits that restrain human economic activity, conversely, the adherents of SS believe the economy is subject to certain physical limits. This is, however, just an outline of a complicated subject to be elaborated further in order to get the required understanding of the different world views' position.

#### **2.4.1 Weak Sustainability**

WS should be looked upon as a modification of neoclassical economy, which is also labelled 'conventional economy'. The assumption is that we do not need any deep structural changes to obtain Sustainable Development. Rather, it is anticipated that some small modifications of the existing system are sufficient. The key premise for this concept is, as already mentioned, the view of natural capital as substitutable with man-made capital. Furthermore, this notion relies on a world view that reckons natural resources as super-abundant. This means that proponents of WS think it is almost impossible to exhaust our stocks. They believe the market mechanisms will lead to more efficient technology and utilize new types of resources. In other words, WS presupposes that technological progress can overcome any resource constraint (Neumayer, 2013, 23). "WS is a paradigm of resource optimism", states Neumayer (2013, 24).

Furthermore, the principle of WS about the substitutability of natural capital has to be elaborated. According to WS a "rise in consumption can compensate future generations for a decline in the stock of renewable resources or a rise in the pollution stock" (Neumayer 2013, 24). However, this does not imply that the proponents of WS dismiss the strategy of reducing climate gas emission and preserve certain natural stocks. Their stand should rather be looked

upon as a strategy that *eventually* will provide more renewable energy and less pollution. They argue that rising incomes, and hence rising consumption, will eventually lead to more renewable resources, and that the emissions will also therefore fall (Neumayer 2013, 24). In a simplified version their assumption is thus that you need cash to take the environment into account.

#### **2.4.2 Strong Sustainability**

Strong Sustainability (SS) encompasses, as mentioned before, the theoreticians, like Tim Jackson, who deem growth economy as the main constituent of the climate problem. The proponents of SS are not against Weak Sustainability (WS). However, they believe WS is just an intermediate step on the path to SS. In their opinion, WS lacks the necessary components to achieve a sustainable development. As already mentioned, SS's essential feature, which distinguish it from WS, is its emphasis on natural capital as non-substitutable. The notion about non-substitutability describes a point of view where “some physical stocks have to be preserved” (Neumayer, 2003, 25). Certain physical forms of natural capital are considered as non-substitutable, without any restrictions will their regenerative capacity therefore deteriorate, is the notion of SS. This means that we have to be prudent; the renewable natural resources, as for example top soil used for food production, have to be used in a way that do not exhaust them, and our emissions have to stay within the absorptive capacity of nature (Neumayer, 2003, 26).

Another distinctive feature of SS is their rejection of the notion that an increased ability for consumption can compensate future generations for a loss of natural capital, which WS endorse. SS has in spite of WS a pessimistic view on economic growth and its role in the case of climate change. According to SS, economic growth is closely connected to increased use of resources, and hence increased pollution and climate gas emissions. Therefore, SS calls for a structural change in the economy. The objectives of sustainable development require a thorough reformation of the economic system is their claim. We need a 'steady-state economy' instead of a growth economy, they allege. The idea of a steady-state economy is to create an economy which brings forth development without economic growth. The main objective of SS is to develop a macro economic system where the ecological restraints settle certain limits for economic activity (Neumayer, 2013, s. 28).

Economic theories that adhere to this line of reasoning are often labeled 'ecological economy', which was the term Spangenberg used in his elaboration about the two world views. This kind of economy keeps the conventional neo-classical economy's principle about efficient allocation, but adds some new parameters to the system, like 'future generations' and 'optimal scale'. As we have seen, both paradigms, WS and SS, contain the factor of future generations. 'Optimal scale', though, is an exclusive feature of SS. This factor is used as supplement to 'optimal allocation'. The factor of 'Optimal scale' was launched by the renowned economist Herman Daly, who illustrated its function with a famous example of a boat. The boat has an optimal allocation of the load, however, despite of the right allocation of the load the boat will nevertheless sink if the aggregated load is too heavy, Daly alleged (Neumayer, 2013, 29). Thus, we need to take the factor of optimal scale into account in order to keep the boat floating, or in analogy, to keep the world stable, is the claim of Daly.

### ***2.5 Critique of the Contemporary Debate about Climate Policies***

Spangenberg, Dryzek and Neumayer do all criticize the contemporary debate about climate policies. According to them the partakers fail to recognize the role of world views. As we have seen, the content of both of the world views are seemingly not that different on the surface: both are using the same concepts and both grant humanity a certain inherent capacity to take action in order to solve the climate problem. However, according to Dryzek's and Spangenberg's line of thought, the actual case is rather that these world views are substantially different and have therefore little in common. Hence, while both Erna Solberg and Tim Jackson, where the former adheres to the world view of WS and the latter adheres to SS, allege that we can solve the problem by stronger human incentives they have fundamentally different conceptions of what this statement entails of policies. In van den Bergh's and de Mooij's terms 'they do not speak the same language' (van den Bergh's and de Mooij 1997, 8).

The outcome of this state is a row of misunderstandings, where different world views are mixed up. Currently, the ecologists and environmentalists turn to economics in order to get more attention towards their concerns, and synchronously, the economists seek to implement the environment in their analysis, Spangenberg asserts (2015, 127). "This apparent convergence (...) tends to hide the deeply different world views that are characterized by mutually exclusive topologies" (Spangenberg 2015, 127). Hence, according to him, the

converging effort from the adherents of the opposing world views just makes things muddier. Spangenberg's message is therefore that it is crucial to understand the notion about different world views in order to have a constructive debate about environmental policies (Spangenberg 2015, 127). Without this insight the debate will continue along a deficient path where the participants misconceive each other's views, is the line of thought. "Stakeholders in the sustainable development discourse should begin asking such deeper running questions, and request transparency regarding their basic world views from decision makers in business, politics, media and civil society" (Spangenberg 2015, 148). Hence, according to Spangenberg, it is vital to explicate the world views of the policy makers, like the dominant world view of Erna Solberg which deem growth to be a part of the solution to the climate crisis. The present debate about how we can solve the climate crisis has to move its attention towards this aspect in order to come up with effective actions, is the claim of Spangenberg.

Dryzek supports the stand of Spangenberg. As we have seen, Dryzek believes it is difficult for people adhering to one discourse to spot, and understand, the view of another discourse. Still, he nonetheless claims that it is vital to reveal the underlying assumptions of the different discourses in order to rectify the public debate about the environment and climate change. According to him it is always an option to step back and compare and assess opposing discourses (Dryzek, 2013, 22). Increased awareness of the variety of discourses can lead to more disputes across the borders of different discourses, he alleges. We should aspire for intercommunication because «[a]ttention to the arguments of critics will facilitate identification of flaws in the discourse», Dryzek claims (2013, 21). Hence the aim of Dryzek's discourse theory is to enhance the public debate about climate change. According to his line of thought, more attention towards the content of the different discourses, or world views will lead to more sound and effective climate policies.

As we have seen, the content of both of the world views are seemingly not that different on the surface: both are using the same concepts and both grant humanity a certain inherent capacity to take action in order to solve the climate problem. However, according to Dryzek's and Spangenberg's line of thought, the actual case is rather that these world views are substantially different and have therefore little in common. Hence, while both Erna Solberg and Tim Jackson, where the former adheres to the world view of WS and the latter adheres to SS, allege that we can solve the problem by stronger human incentives they have

fundamentally different conceptions of what this statement entails of policies. In van den Bergh's and de Mooij's terms 'they do not speak the same language'.

Eric Neumayer's work underpins the message of Spangenberg and Dryzek. According to Neumayer it is common to entangle the content of the two world views of Weak Sustainability (WS) and Strong Sustainability (SS). The present discussions about climate policies are often falsely inclined towards the terminology of WS, Neumayer alleges. According to Neumayer the present debate concerning the correct discount rate misrepresents the interests of environmentalists and policy makers who call for more preservation of the environment. Similar to Spangenberg, Neumayer criticizes environmentalists for using the concepts of WS, while they most likely adhere to SS.

The idea of discount rate is that upcoming generations can be compensated for arising environmental hazards by human made capital, or welfare (GDP). The discount rate is a mean which can, for instance, be employed in order to implement the factor of sustainability in the national budget. A low discount rate indicates that the budget should pursue strong emission abatement policies in order to sufficiently take the interests of future generation into account. Conversely, a high discount rate indicates that the policy makers believe that the GDP welfare of future generation will be substantially bigger than the present welfare. According to their line of thought, the increased welfare will compensate for the environmental hazards the present human activity may entail. Hence, a high discount rate implies economic policies with less emissions constraints.

It is important to remind us that the view of Nordhaus is justified through the rationale of WS, which relies on the premise of substitutability, Neumayer claims. For instance, Nordhaus personally advocates a low discount rate, which implies stringent emission abatement (Neumayer, 2013, 30). In view of the world view of WS this means that Nordhaus believes emission abatement will lead to a larger *output*. The output is the quantity of goods or services produced within the economy, which is often measured in Gross Domestic Product (GDP) (Deardorff 2010). "Output production generates CO<sub>2</sub> emissions that lead to climate change, which leads, in turn, to losses in output", is the line of thought of WS and Nordhaus, Neumayer alleges (2013, 31). Hence, according to WS's and Nordhaus's line of thought, it is necessary to reduce the emissions *in order to maintain the economic growth*. In other words, the explicit goal of sustainability, "per capita welfare should not be declining

over time”, can, according to the premise of WS and Nordhaus, just be fulfilled by continued economic growth. Thus, the point is that the abatement of emissions is justified through an alleged loss in the output and the need for more economic growth. Hence, the suggested restrictions are apparently *not* launched in order to preserve natural values, which the opposing view of SS calls for (Neumayer 2013, 30).

However, the problem is that environmentalists who call for preservation of certain nature values and stronger emission abatement policies uncritically make use of the terms of Weak Sustainability, Neumayer claims. For instance, Nordhaus and similar economists are often criticized by environmentalists for employing a too high discount rate. The environmentalists claim that the discount rate has to be set lower to avoid dangerous climate change and grant future generations a fair share. However, according to Neumayer such statements illustrate how environmentalists and policy makers uncritically entangle the content of the two world views of Weak Sustainability (WS) and Strong Sustainability (SS). According to him the essential concern of environmentalists circles around the premise of SS which consider natural capital as non-substitutable. Environmentalists who call for strong emission abatement policies are surely *not* doing this because they want to save future generations from some welfare and consumption loss which is the logic of WS, Neumayer claims. The adherents of WS consider natural capital as substitutable, which implies that the concern about preservation of natural stocks is ultimately irrelevant. Therefore, the initial task of the environmentalists is to refute Nordhaus and his adherents' premise of substitutability, Neumayer claims (2013, 40). According to Neumayer the most common mistake among policy makers in the field of climate change is to miss out on the crucial distinction between substitutability and non-substitutability and the opposing world views of WS and SS.

While discussing actions against climate change the point is that it is not sufficient to reduce it to a question about the right kind of discount rate. The foundational and crucial question is about the soundness of the premise of substitutability, claims Neumayer. Thus, the present debate about climate change and which actions we should employ is inadequate. Neumayer calls for a debate which explicitly discusses the world views of WS and SS and the premises about substitutability and non-substitutability. Without such an explicit debate it is unlikely that we will be able to solve the climate problem is the message of Neumayer.

## 2.6 Summary

In this chapter I have presented my view on the climate problem, namely that there is a gap between the policy makers' articulated effort towards a solution to the climate problem and the poor factual results of the climate policies. Furthermore, I have asserted that this gap should be addressed through an examination of the factor of world views. In this regard, I have presented the main conflict line in the present debate about climate policies. The dominant world view of growth economy and Weak Sustainability, which Jens Stoltenberg and Erna Solberg adhere to, is opposed by the world view of Strong Sustainability which dismisses the premise of growth economy.

I have elucidated the aspect of world views using the theory of Joachim Spangenberg. According to him, it is not sufficient to solely discuss moral ideals and motivation in order to come up with a sound solution to the climate problem. Policy makers can adhere to the same moral ideal and at the same time pursue two substantially different policy strategies in order to obtain the same objective of sustainable development. Therefore, it is crucial to explicitly discuss the aspect of world views instead, Spangenberg claims. According to him, the aspect of world views is “determining the practical conclusions from moral principles and ethical attitudes” (Spangenberg 2015, 127). As already suggested, both of the practical policy strategies, or world views of WS and SS, can most likely not hold the answer to the climate problem. Hence, evidently, the factor of world views seems to play a crucial role in the quest for a solution to the climate problem. Furthermore, the view of Spangenberg is supported by John S. Dryzek and Eric Neumayer. Dryzek, for instance, emphasize the need for intercommunication between the opposing world views in order to locate flaws in the argumentation. The theories of Spangenberg, Dryzek, Neumayer and van den Bergh and de Mooi underpins the notion that world views are a vital aspect that should be assessed further in order to come up with a sound solution to the climate problem.

Another insight from this chapter is that the two opposing world views of Weak Sustainability and Strong Sustainability, despite of their differences, seemingly are motivated by the same moral ideals to act upon the situation. Hence, it is important to examine the relation between world views and moral ideals further. An important question is whether the moral ideals offer some guidance in respect of *which* world view the policy makers should pursue. Furthermore, it is important to discuss whether the policy makers are morally obliged

to take the different world views into account. The next chapter will examine this thread.



### 3 Moral Ideals and Sustainable Development

Despite the differences, it is important to remind us that the two world views of Weak Sustainability (WS) and Strong Sustainability (SS) are conjoined about the same objective of sustainable development. Both adhere to the same definition of sustainable development, which grants future generations at least the same amount of capital available today. They are both concerned about the wellbeing of future generations and they both grant them rights in the present state. Hence, it seems like both world views agree that we have obligations towards future generations.

Furthermore, this obligation seems to fall under the aspect that Spangenberg labels *moral ideals*. According to Spangenberg moral ideals contains moral principles and ethical attitudes which determine human and political action (Spangenberg 2015, 127). These ideals are suggesting how we *should* act. This means that the obligation is backed by arguments that are telling us why we *should* act upon something: we *should*, for example, act upon a problem because it is the morally right thing to do. The obligation towards future generations may also be justified by other rationales than moral theories, for instance through economic concerns. However, this master thesis is primarily concerned about the moral factor, which I have argued are present in the case of climate policies. The interesting aspect in the particular case of the climate problem is that the two opposing world views on sustainability seem to adhere to the same moral ideal, namely the obligation towards future generations.

Spangenberg, with support from Dryzek and Neumayer, alleges that the policy makers have to discuss the content of the different world views explicitly in order to come up with sound climate policies. Their message is that, despite of the policy makers moral motivation to act upon the problem, both of the world views cannot solve the problem. In this respect, it is important to examine whether the moral ideals actually offer some guidance in respect of *which* world view the policy makers *should* pursue, which the policy makers may overlook. My intent is to find out whether the policy makers in their attitude towards the aspect of world views are breaching with some of the content of the moral ideals they adhere to. Furthermore I will examine whether the moral ideals relate to, and support Spangenberg's call for explicit discussions about the content of the different world views.

First I will give a descriptive account for the moral justification of the sustainable development strategy and the obligations towards future generations. Furthermore I will

discuss what the moral justification of sustainable development demand from the policy makers. I choose this approach because the policy makers, according to the alleged gap between their articulated effort and the poor factual results, are seemingly already aware of their responsibility in order to act upon the climate problem. In other words my intent is *not* to justify certain normative ethical beliefs, it is rather about presenting the moral ideals the policy makers already adhere to, and subsequently discuss whether they actually act in accordance with these ideals.

### ***3.1 Sustainable Development and the Value of Future Generations***

I will now turn to the moral ideals that seem to motivate the policy makers to act upon climate change. UN's definition of Sustainable Development from 1987 is a good starting point for the quest: "Humanity has the ability to make development sustainable to ensure development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (UN Documents 2015?). As we can see, SD is justified and constituted by the value and obligation towards future generations. Obligation towards future generations is furthermore rooted in ethics and moral theory. In this field, the concern for future generations is a matter of 'intergenerational justice' (Lucas 2014). The theoreticians discuss whether or not we have ethical duties towards future (and past) generations. One stand among the theoreticians is that future generations hold legitimate rights and claims against our present generation, hence we are, as representatives for the present generations, obligated to take them into account (Lucas 2014). In more practical terms this means that "present generations may be obligated by considerations of justice not to pursue policies that create benefits for themselves but impose costs on those who will live in the future" (Lucas 2014). The strategy of SD is seemingly in line with this notion of responsibility. The next step of this elaboration is to dig deeper into the matter and examine how the value of future generations and inter-generational justice relates to, and may originate from other moral ideals that are foundational to our democratic society.

### ***3.2 The Values of Democracy***

I shall now give an account for democracy and the values it consists in and entails. According to my understanding of the problem the policy maker's concern about SD and future generations most likely originate from the values of democracy. I shall argue that the democracy and its constitutive values entail moral ideals which the policy makers most likely

adhere to in the case of sustainable development and climate policies. I choose to use cases from the Norwegian context in order to carry out a lucid examination of these values. It is, however, important to emphasize that Norway takes part in the larger context of the democratic tradition in western societies. The further examination will demonstrate how Norway and western societies are founded on the democratic values equality and freedom. These values are furthermore present in the global setting through the commission of the United Nations.

First, Norway is considered as a liberal democracy. Basically, this is the standard form of government in the western and developed part of the world (Hovde and Svensson 2014). My aim is therefore to explicate the constitutive values of democracy that are usually taken for granted in our part of the world. The original meaning of democracy is 'rule by the people' (Holden 2003, 147). This is surely an understandable description of the idea of democracy, however, in a modern sense, the concept inhabits a broader range of content. On the one hand the concept describes a form of government, on the other hand it represent the values of freedom and equality (Svensson 2007, 43). However, these modes are not totally separated issues, for instance, a common understanding of democracy is that this form of government shall reflect and promote the values of freedom and equality.

I will now take a closer look at these two prominent values. First, *equality* among citizens is considered as a necessary condition for a functioning democracy. Jean-Jacques Rousseau, who is considered as one of the inspirational sources behind modern democracies, claimed that a legitimate democracy has to be egalitarian. According to him other variants of proclaimed democracies that lack this quality are rather akin to slavery (Christiano 2008). The line of thought is that without equality the decisions are just made by *some* of the people, hence it departs from the original idea of democracy where the decisions should come from the *whole* people. The prominent aspect of equality, gives rise to an alternative definition of democracy which describes it as 'a society in which equality exists' (Christiano 2008).

Let us proceed to the value of *freedom*. First, the functioning democracies, nowadays, is often labelled 'liberal democracies'. Today it is widely regarded as the only form of democracy which actually reflects the values of democracy, e.g. equality and freedom (Holden 2003, 148). Though, 'liberal' in 'liberal democracy' refers to the value of individual

freedom. 'Liberal' is used to highlight the aspect of individual freedom as a prominent aspect in the constitution of a democracy. The line of thought is that the power of the government should be limited by a bill of rights in order to protect, or even promote individual freedom (Holden 2003, 148). Furthermore, this concept of freedom is looked upon as a precondition for a functioning democracy. Certain rights, like freedom of speech and association, offer the range of choices which enable the individual to make free political decisions through elections. "In short, free elections are seen as a necessary condition for – and liberal democracy as the only possible form of – democracy" (Holden 2003, 148). Equality and freedom seem to be interdependent, equality promotes freedom, and vice versa.

The elaboration of the values of equality and freedom demonstrate that liberal democracies, like the Norwegian, advocate a certain view on human individuals that grants every individual rights that enable us to practice as equal and free agents in the society. These rights are expressed most prominently through the Human Rights, which were declared by UN in 1948. Most of the liberal democracies are committed to this declaration, and those that are not are still measured and judged in the light of its content. Human rights explicate the constitutional values of democracy, namely equality and freedom. They grant every human individual inviolable rights, independent of possible segregating factors as social class, gender and ethnicity (Strand 2014). Furthermore, these rights can be looked upon as a benchmark for UN's aim and work. UN was established after the Second World War as a peace initiative. The organisation should work for peace, and moreover, with corresponding subjects as closing the poverty gap of the world. UN should aspire for less economic and social differences in the world (FN-sambandet, 2015). In other words, solidarity and development are key aspects of UN's commission.

Since the initiation of UN Norway has supported their mission. "Norway does often define UN as a 'corner stone' in Norwegian foreign policy" (FN-sambandet, 2015). However, Norway is not in a unique position in this regard. Europe, for instance, has after the Second World War pursued the values of democracy and human rights. The establishment of the European council in 1949 is a direct outcome of this course. All of the countries on the European continent take part in the council which promotes human rights, democracy and the rule of law (Store norske leksikon 2015). Moreover, the European Union is also considered as a promoter of these values and was in 2012 awarded the Noble Peace Price for their effort.

According to the Noble committee EU has “contributed to the advancement of peace and reconciliation, democracy and human rights in Europe” (The Norwegian Nobel Institute 2012). These examples show that Norway, and Europe and UN as well, seem to be built on a certain cluster of values that the policy makers seek to follow.

Furthermore, 'Our Common Future', the initial document about sustainable development launched by UN, is undoubtedly influenced by, and makes use of the values that the Human Rights should protect. A world which is characterized by poverty and inequity is more likely to cause ecological crisis, is one of the claims in the document. Furthermore, the document holds that “[s]ustainable development requires meeting the basic needs of all and extending to all the opportunity to satisfy their aspirations for a better life” (UN Documents 2015?). In other words, a fulfillment of SD presupposes a world with less inequity where people are lifted out of poverty. The document illustrates this notion with a contribution from a hearing about SD in Nairobi back in 1986. The speaker calls for more attention towards the negative consequences that come out of poverty. “Because it is only free people, people who have rights, who are mature and responsible citizens, who then participate in the development and in the protection of the environment”, the speaker asserts (UN Documents 2015?). Furthermore, the speaker alleges that environmental and social bads, such as deforestation and malnutrition, are not caused by lacking resources; it is rather a result of unjust policies. As long as abortive policies deny people their rights the negative trend will continue, is her claim (UN Documents 2015?). The document uses this example to demonstrate the interdependence between environmental and social concerns. Both factors have to be addressed in order to achieve the objectives of Sustainable Development, is the message of the document. Furthermore content of the document indicates that the citizens in undeveloped countries have to be granted the same rights as we hold in order to obtain a sustainable development. Moreover, this example indicates that the logic of Sustainable Development is based on the values of equality, freedom and Human Rights.

Another vital foundational element of democracy is the aspect of rationality and communication. According to some theoreticians, democracy entails augmenting ethical implications. Democracy involves open discussions that enhances the people's skills in critical thinking, is the claim. The notion is as follows: people are encouraged to think rationally because their opinion actually matters in a democracy where they are free and

equal (Christiano 2008). Some theoreticians also deem democracy to be a framework that enhances the citizens' moral qualities: while participating in open discussions with other equals we have to justify our stand and are forced to consider the interests of others, is the line of thought. Such views on democracy suggest that the system improves our rationality and morality (Christiano 2008).

Furthermore, a similar approach to democracy focuses on public justification. According to this theory, policies and laws is legitimized if they come out of public debate among equals, which is based on reasoned arguments. “Democracy, properly understood, is the context in which individuals freely engage in a process of reasoned discussion and deliberation on an equal footing” (Christiano 2008). Habermas's famous discourse theory describes rational discussions as “ritualized competition for the better arguments” (Bohman, James, Rehg 2014). Democracy shall provide the conditions for this activity. The participants in democratic discussions are obliged to take relevant aspects into account and meet certain burdens of proof, is the notion of the theories about democracy. Hence, according to these views, the idea of democracy is intertwined with the use of our human rational capacity.

### ***3.3 The Moral Ideal of Democracy and Sustainable Development***

My intent has been to demonstrate how the policy makers' quest for a sustainable development (SD) is interwoven with the constitutive values of democracy. The previous examples indicate that SD and the obligation towards future generations are most likely inspired by the human rights and the connected values of freedom and equality. I have suggested that the policy makers' aim for sustainable development and effective climate policies is constituted, or inspired, by the foundational values of equality, freedom and human rights, which liberal democracies consist in. I have furthermore given an account of the foundational character these values are granted in the context of European democracies and in UN. These values are seemingly considered as an overarching moral ideal, which the policy makers in UN and the western democracies pursue to fulfill in their work.

My claim is that the idea of liberal democracies, with its connected values, are seemingly considered as a moral ideal that motivates the policy makers to act upon the climate problem. The notion is as follows: if the policy makers do not act upon the problem they breach the moral ideal of liberal democracy which actively promotes the values of

equality, freedom and Human Rights. Furthermore, I have presented the aspect of open and rational discussions, which is regarded as a crucial aspect of a legitimate democracy. Free, reasoned discussions and deliberation concerning the policies and laws which the society endorses is considered as a vital feature of liberal democracies. In this regard my claim is that this is an important value of liberal democracies, which also belong to the moral ideal of democracy. This value indicates that the policy endeavor to pursue the best arguments and solutions in order create effective climate policies. In this regard, the theories of Dryzek and Spangenberg can be considered as a warning. Their theories indicate that there is a major flaw in the current discussions among policy makers in the case of climate change. According to them the partakers in the debate about climate policies misconceive the distinction between ethical ideals and world views, and do furthermore mix up the content of the world views of Weak Sustainability and Strong Sustainability. Hence, according to their understanding of the problem, the debate concerning the environment and the climate problem seem to diverge from the ideal of democracy where one should pursue rational discussions and the best arguments.

The next chapter shall examine what attitude the policy makers have towards world views. If the examination shows that the policy makers ignore the factor of world views, and if Spangenberg's and the other theoreticians' notion about world views is correct, this indicates that the policy makers fail to act in accordance with the moral ideals of democracy, which they seemingly adhere to.

#### **4 The Dominant World View**

According to the previous chapter, the moral aspects of equality, fairness and obligations towards future generations are already broadly accepted by politicians and policy makers within UN and the western world. The path of the policy makers are seemingly paved with good intentions towards the environment and the less advantageous. However, I have suggested that the foundational value of democracy force the policy makers to aim for open reasoned discussions. This implies that they are obliged to take the aspect of different world views into account if there are reasoned arguments that underpin the relevance of the aspect. Spangenberg's and Neumayer's theories indicate that there is a major flaw in the current discussions among policy makers in the case of climate change. According to them, the policy makers in the present state leave out the aspect of different world views. Hence, if their claim is correct, this indicates that the policy makers do not act in accordance with the moral ideals of democracy. I shall now examine empirically how the contemporary policy makers actually deal with the aspect of world views and furthermore discuss the soundness of the claim of Spangenberg and Neumayer.

The elaboration of the distinction between Weak Sustainability and Strong Sustainability have revealed the underlying premises of the two prominent world views that are present in the contemporary debate about climate policies. I shall now give an account for the relative strength between the two world views in the present state, and furthermore examine how the policy makers deal with different world views. As I have already indicated through the example of the Norwegian Prime Minister Erna Solberg: Weak Sustainability (WS), the world view that emphasizes continued growth, has seemingly a dominant position among the present policy makers. It is therefore especially interesting to see how the policy makers that adhere to the dominant world view of WS relate to the opposing world view of Strong Sustainability: do they take it into account at all?

##### ***4.1 Contemporary Examples***

Jens Stoltenberg, former prime minister in Norway and UN special envoy on climate change, is a prominent representative for the course Green Growth and Weak Sustainability. By virtue of his engagement in UN Stoltenberg in the fall of 2014, fronted the recognized report 'The New Climate Economy', which conveys strategies for how the economy can go together with reduced climate gas emissions.



The message of the report is that economic growth is required in order to fight poverty, unemployment, and ensure the pensions of the citizens in the rich countries (...) and moreover that it is possible to combine the growth with reduced emissions», Stoltenberg states. (Regjeringen 2014)

According to this and similar statements of Stoltenberg he considers growth as an indisputable premise in the quest for a solution to the climate problem. This notion is supported by prominent policy makers. For instance, the Norwegian Prime Minister, Erna Solberg, hails the report and states that the report refutes the sceptics that have alleged that growth economy is incompatible with reduced climate gas emissions. «[N]ow we realize that this [the negative assumptions about growth] is not correct, rather we have to find a solution with the help of growth» , Solberg claims at the launch of the report of Stoltenberg (Regjeringen 2014 , my brackets). Solberg's view is broadly backed by the other Norwegian parties, seven out of eight parties in the Norwegian parliament adhere to the growth course.

Solberg's party, Høyre, the conservatives, is the second biggest party in Norway (Regjeringen 2013) and is, not surprisingly, a clear cut supporter of Green growth. “We believe the free market is the best mean for solving the environmental problems, and this is the reason why Høyre is optimistic on behalf of the environment” (Høyre 2014a). Høyre, furthermore puts emphasize on the creative and transformative capacity of humanity and does therefore present themselves as 'technology optimists'. Their assumption is that humanity through the history has overcome emerging environmental problems. From this they infer that it is also possible to solve the climate problem (Høyre 2014a).

Norway's biggest party, Arbeiderpartiet, the social democrats, does not formulate their stand as explicit as Høyre. It is nevertheless easy to find examples that underpin the same notions as Høyre advocates. For instance, they assert; “technology is the opportunity for our future” (Arbeiderpartiet 2014a). Arbeiderpartiet, as well as Høyre, put their emphasis on the development of technology and calls for a “green shift in the technology” (Arbeiderpartiet 2014b). Although the party does not explicitly express an adherence to Green growth, they show their affiliation to the paradigm implicitly through their technology optimism.

Even Sosialistisk venstreparti (SV), the socialist party, and Venstre, the liberal party, those usually address themselves as environmentally friendly parties are seemingly not

interested in, or aware of, the dispute regarding different world views. They are seemingly entrenched in the world view of Weak Sustainability and growth economy as well. SV's program is rather diffuse regarding what strategy they prefer in order to obtain the environmental objectives. It is not obvious that they are aware of the dispute regarding different world views and the role of growth in the present debate about climate policies: "SV's politics of economy is a politics for low climate gas emissions, innovation and renewal" (Sosialistisk Venstreparti 2014?). SV does not explicitly take the aspect of growth economy into account in their program. This may indicate that their world view is founded within the conventional growth economy. The liberal party, Venstre, does neither pronounce anything explicit about different world views. However, according to their foundational values it is likely to infer that they adhere to the ideas of Green growth and Weak Sustainability. Their liberal grounds are conveyed in their program; "Venstre consider democracy, the constitutional state, the market economy and the civil society as the infrastructure of liberty" (Venstre, 2009). Furthermore, Venstre as well, aspires for substantial abatement of the climate gas emission through employing and developing new climate technology.

There is nonetheless one party, out of eight, that adheres to the ideas of Strong Sustainability. Miljøpartiet de Grønne (MDG), the Norwegian Green Party, is a marginal party, but has, however, one member of the parliament. MDG does explicitly take a stand against the idea of Green growth and states that an environmental friendly economy cannot be dependent on a continuous growth (Miljøpartiet de Grønne, 2013?a). "The Green party rejects the dogma which consider quantitative production- and consumption growth as a good and the solution to all crisis" (Miljøpartiet de Grønne, 2013?b). From their point of view growth will always lead to increased resource use and emissions. This view contests the idea of technology optimism that is a vital aspect within the framework of Green growth.

Furthermore, in advance of the national elections for the parliament in 2013 MDG met Høyre, Arbeiderpartiet, and SV in a broadcasted debate concerning environmental politics. This debate demonstrated the attitude among the parties regarding the alternative world view of Strong Sustainability. For instance, Arbeiderpartiet deem MDG's call for a decrease in our consumption as "idealistic symbol politics that will not work" (NRK 2013). Arbeiderpartiet and Høyre show no interest to MDG's argumentation. SV is not that harsh as

the other parties, but they do nevertheless object upon MDG's premise regarding reducing the overall use of energy.

The majority of the Norwegian political parties seem to be entrenched in the growth paradigm of Weak Sustainability, explicitly and implicitly. A minority, though, challenges this point of view. However, at the moment, their influence is marginal. Besides MDG, it is just the left wing socialist party, Rødt, which is not present in the parliament that shares the same ideas of Strong Sustainability (Rødt 2010). The relative strength of the proponents of Green Growth and Weak Sustainability is therefore superior to the alternative voices. Aggregated, the adherents of Green growth and the world view of growth got approximately 96 percent of the votes in the national election for the parliament in 2013 (Regjeringen 2013).

I have chosen to include the bureaucrats in this examination. Their role is to give professional advices to the politicians in charge and do therefore hold indirect power. The bureaucrats supply the politicians with field specific knowledge. For instance in the case of climate policies the politicians turn to the economists and the researchers in the ministries, of for instance climate and finance, to get field specific advices regarding their politics. It is therefore interesting to see whether the experts in the ministries have another attitude to the subject compared to the politicians: do they for instance have a more open attitude towards the alternative world views? I have interviewed key officials in the Norwegian Ministry of Climate and Environment, the Ministry of Finance and the Directorate of Environment to get an impression of how the bureaucrats relate to the aspect of world views.

First, according to Inge Skeie (2014), leader of the sustainable development division in the Ministry of Finance, the notion that an efficient and sustainable use of all resources, also environmental and natural resources, is a precondition for maximum income and production has been in the core of Norwegian environmental policy for years. To achieve this, externalities has to be corrected, he alleges. According to Skeie the best way to correct for externalities is to use the price mechanism. First, this means that the climate policies, which are launched, operate together with the principle of growth within the economy. Furthermore, this line of thought implies that the politicians and economists believe an effective growth economy, together with market measures as price mechanisms are the best way in order to address the climate problem. Norway introduced a tax on CO<sub>2</sub> emissions in 1991 and at present more than 80 per cent of Norwegian emissions of greenhouse gases is

taxed or covered by the European Emission Trading System, says Skeie (2014). In addition, development of climate friendly technologies are supported through several schemes, says Inge Skeie (2014). Our way of living implies that we have to rely on extensive development of the technology to fulfill the environmental objectives, asserts Skeie (2014). According to the interview with Skeie, the Ministry of Finance have faith in the existing market measures and technology development. They do, for instance, not question the soundness of the growth economic means or discuss the alternatives of Strong Sustainability.

According to Ingvild Sæverud, Director General in The Ministry of Climate and Environment, the present Norwegian political strategy in order to reduce the climate gas emissions is mainly to put price tags on emissions, develop new technology, and buy climate gas emission quotas (Sæverud 2014). Furthermore, she states that their emission mitigation prospects rely on both implementation of more efficient existing technology and new not yet developed technology. According to Sæverud (2014), the recent report, 'The New Climate Economy', is telling them that continued growth and the climate targets can be combined. The Ministry of Climate and Environment is thus seemingly following the course of Weak Sustainability and the premise of technology development. The Ministry's attitude is underpinned by the recent 340 pages report of the Norwegian Environment Agency that was submitted to the Ministry of Climate and Environment. The report contains suggestions and scenarios concerning how Norway can take sufficient action in regard of the two degree target. However, in the delimitation of the report they state that their approach presupposes a continued economic growth in Norway (Miljødirektoratet 2014). Hence, the directorate has deliberately chosen not to consider climate actions that contest the premise of growth.

Are Lindegaard, Senior Climate Adviser in the Environment Agency, points out for instance that the increased domestic emissions from the petroleum- and the transport sector are caused by a rise in the consumption of these goods. However, according to Lindegaard (2014), the agency usually not discusses factors as the quantity of usage, or growth as such in their work. For an economist it is easier to use the factor of technology in their calculations and prospects, he alleges (Lindegaard 2014). Lindegaard considers the two degree target as an exceedingly demanding task, still, he has confidence in the market system. He believes an active use of market measures can speed up the process towards the requested emission objectives (Lindegaard 2014). Furthermore, the Environment Agency is mainly

committed to the alleged potential of technology development. The Norwegian electric vehicle incentive illustrates the transformational momentum of the market, Lindegaard asserts (2014). His example refers to a recent shift in the Norwegian car market. The last years the authorities have encouraged people through extensive tax compensation to buy more environmental friendly cars. This strategy has been a great success, in few years the market has changed totally. In 2007 there were 1500 electric vehicles on wheels, now, in 2015, the number has surpassed 50000 (Regjeringen 2008?, Grønn bil 2015).

The examination has demonstrated that the bureaucrats share the inclination of the politicians towards the world view of Weak Sustainability (WS). The ideas of growth economy and WS are seemingly an uncontested foundation of their work. Conversely, the conflicting world views that contest the premise of growth economy seem to be alien to the experts in the bureaucracy. Hence, the professional advices of the bureaucrats that are conveyed to the politicians are undoubtedly founded in the world view of growth economy and Weak Sustainability.

#### ***4.2 Historical background – ‘Growth is good’***

I will now proceed with a further elaboration of the growth economic principle, which is the main constituent of the world view of Weak Sustainability. Growth is considered as the driving force of the present economic system. However, according to John S. Dryzek (2013) the growth principle goes beyond the scope of economy and is deeply embedded in our society as such. Through the last centuries industrialism and the principle of growth have become an entrenched part of the global society, is the claim of Dryzek. Dryzek considers industrialism and the growth principle as the dominating discourse, or world view, of our time, which guide the work of the policy makers. Industrialism has been a prominent political course in the western societies since the industrial revolution spread out through the European countries during the nineteenth century (Bull and Tvedt 2014). According to Dryzek, the growth paradigm of industrialism is the constitutional cause of the uncontrollable climate gas emissions and the emerging climate problem is (Dryzek 2013, 14). Moreover, originally industrialism had no room for concerns about the environment, claims Dryzek (2013, 14). According to him the industrial logic implies that stocks are conserved just for the sake of possible future utility.

Furthermore, Dryzek asserts that we should keep in mind that the environmental discourses, or world views, actually depart from industrialism. This means that the actions towards more preservation of environmental goods are often coloured by the principles of industrialism. In the quest for a sound solution to the climate problem it is important to have in mind that strategy of sustainable development and Green Growth is a continuation of the ideas that were developed by industrialism. Thus, in order to understand the ideas and forces behind the world view of Green Growth and Weak Sustainability fully it is important to reveal the history of industrialism and the principle of growth. “Industrialism may be characterized in terms of its overarching commitment to growth in the quantity of goods and services produced and to the material wellbeing that growth brings” (Dryzek 2013, 14). Norway, as other western societies, has been shaped by industrialism through the last centuries. Our nation has gone through an unprecedented development the last couple of centuries. The growth has transformed our nation from a poor community of farmers to a rich industrialized materialistic society. Hence, economic growth is considered as a good among most of the policy makers.

The intriguing claim in Dryzek’s work is that from an environmental point of view all ideologies, such as liberalism, socialism, and fascism and so on, can be looked upon as variations of industrialism (Dryzek, 2013, 14). According to him the ideologies have different views on how the power should be structured but they *share* the foundational assumption that growth is good for the development of the society. Hence, most of the substantial political disputes through the last century were situated within the paradigm of industrialism. This implies that, for instance, socialists and liberals in spite of their substantially different views on societal issues actually share the same view on industrialism. This notion suggests that the political division line between left and right is not that fundamental as we usually think. Hence, in the case of climate policies, the two political fractions most likely adhere to the idea of Green Growth and the connected policies. Furthermore, the sometimes harsh debates between left and right wing parties about climate actions do, most likely not, problematize the role of growth at all. The implication of this notion is that the political discussions about climate actions may be captivated in the scope of industrialism and growth.

The 'labour course policy' (Norwegian: 'arbeidslinjen') from the postwar history of Norway supports Dryzek's notion about industrialism and the adherence to the growth

principle across party lines. This is a political objective where full employment is considered as a good which the society should pursue. To fulfil this objective we are dependent on a continuous economic growth. This objective was introduced by the Norwegian Labour party and was also widely accepted by the other political fractions through the 1990's (Sejerstad, 2014). The course is a successful strategy, at least for Norway. Our unemployment rate is, at the moment, tremendously low and immigrant workers have been a crucial factor in order to maintain economic growth. This example illustrates the dominant position of the world view of industrialism and growth. However, there are also some new tendencies in Europe which contest the dominant paradigm and support the view of Jackson and other opponents to the growth economy (Sejerstad, 2014).

Still, it seems like Norway is an exception from the rule, the tendency in rest of Europe is of the opposite character. Despite of the Norwegian trend the unemployment rate in a range of other European countries is strikingly high, and the prospect for a quick fix of the problem is not plausible. Especially southern Europe has not managed to recover from the economic crisis back in 2008. For instance, in Spain and Greece respectively 23 and 26 per cent of the workforce are unemployed (Eurostat 2015). This state has led to new discussions about the soundness of the "labour course". An alternative that has been suggested is a new course where the workers to a larger extent share the available work by reducing the general working hours. Such a rationale challenges the standard procedure of the labour course where the output, or increased economic growth, that comes out of the work effort is used to increase our ability to consume (Sejerstad, 2014). The output is the quantity of goods or services produced within the economy, which is often measured in Gross Domestic Product (GDP) (Deardorff 2010). The new situation in the European countries reveals the basic debate about world views. This is a discussion regarding what objectives our economic and social system should aspire for. The strong emphasis on the labour course in the European and Norwegian community demonstrates how the world view of industrialism and growth are an entrenched part of our society. Furthermore, the new opposition towards the established logic indicates that another world view, which contests the conventional view on growth, is emerging.

### ***4.3 Summary***

The Norwegian policy makers' attitude towards climate policies seems to be entrenched in the growth logic. A great majority of the political parties follow the strategy of Weak Sustainability directly and indirectly. Furthermore, the experts in the bureaucracy seem to be even more loyal to the world view of growth and Weak Sustainability than the politicians. Dryzek's notion about the dominant world view of industrialism and growth is largely confirmed by the contemporary examples from the Norwegian context. Dryzek's approach gives a credible account for the underlying forces that constitute the dominant position of Weak Sustainability. His account indicates that there are strong forces in play that may override pure reasoned arguments in the contemporary discussions about climate policies.



## **5 Assessment of Green Growth**

The previous chapter demonstrated the dominant position of the world view of growth and Weak Sustainability. The politicians and the policy makers are seemingly not discussing other world views at all. According to the theories Spangenberg, Dryzek, and Neumayer this is a deficient path in order to come up with effective policies towards the climate problem. Explicit discussions and comparison of the content of the different world views are required in order to solve the climate problem, they allege. Hence, it is a bit disturbing to see that the policy makers mostly ignore the alternative world views. They seem confident about the supremacy of the dominant world view, Weak Sustainability. The aim of this chapter is therefore to assess the soundness of the pursued strategy of Green Growth, which is a part of the world view of Weak Sustainability. Green Growth is seemingly the preferred strategy in order to solve the climate problem in UN and among the majority of the policy makers. I shall find out whether the policy makers are entitled to pursue the world view of Weak Sustainability with such confidence: are their position supported by valid arguments?

Despite the alleged confidence of Solberg and Stoltenberg and the majority of the policy makers, the growth strategy is contested by credible arguments from the green political movement and theoreticians like Tim Jackson, which adhere to Strong Sustainability (SS). Another example of a theory that falls under the rationale of SS is the work of a group of researchers at the Program of Industrial Ecology at NTNU. Arvesen et. al.'s stand is underpinned by an assessment of the technology premise in the strategy of sustainable development (Arvesen et. al. 2011). Such an assessment is of interest because the strategy of Green Growth, and Weak Sustainability, relies on the premise of technology development in order to mitigate the climate gas emissions. According to Arvesen et. al. the policy makers neglect a range of factors that weakens the premise of technology: "Society must likely seek deeper changes in social and economic structures to preserve the climatic conditions to which the human civilization is adapted" (Arvesen et. al. 2011, 7448). My intent is to assess the soundness of Green Growth in light of the theories of Tim Jackson and Arvesen et. al. First, however, I shall give an account of UN's strategy of Green Growth and the connected premise of technology development.

### ***5.1 Green Growth and Decoupling***

“[A] green economy is one whose growth in income and employment is driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services”. (UNEP 2013?)

The green economy initiative can be considered as a practical auxiliary in order to fulfil the objectives of sustainable development and Weak Sustainability. It is important to notice that UNEP equals Green Economy with the concept of 'Green growth', I choose to use the latter term. UN has admitted that they may have underestimated the role of the economy in their sustainable development initiative. The world has not been able to unite the three factors of environment, economy and social concerns, which SD consists in. The Green Growth initiative is an outcome of this acknowledgement.

According to UN's Environmental Program, UNEP, “the concept of a green economy does not replace sustainable development; but there is a growing recognition that achieving sustainability rests almost entirely on getting the economy right” (UNEP 2011, 17). In order to create a growth economy that leads to reduced climate gas emissions UNEP and the world view of Weak Sustainability relies on the premise of technology development and the factor of *decoupling*. This means that their suggested policy actions, as for instance a new system of taxation, should entail a shift in the use of technology. *Decoupling*, according to UNEP, is about breaking the link between environmental bads and economic good (UNEP 2011b, 14). In this context 'Economic good' means 'economic growth'. In other words, in the current state, economic growth, or good, has a causal connection to increased climate gas emissions.

Furthermore, UNEP's basic assumption is that economic growth is a good that should be pursued because it is the best way to provide welfare to our societies. Developing human well-being from resource consumption is at the heart of the Green Economy Initiative, UNEP proclaims (2011b, 2). This quote explains clearly the fundamental logic of UNEP's engagement; the conventional growth economy, which is based on resource consumption, is a premise of their work. Thus, in order to create sustainable development they aim at creating policies that maintain economic growth and maximize the resource productivity at the same time. The assumption seems to be that resource consumption is the driving force of the economic system and this is a premise that cannot be altered. Hence, the growth economic

premise of UNEP and Weak Sustainability rely heavily on the means of technology development in order to reduce the climate gas emissions. The idea is that the resource use of each consumed unit should be reduced to a minimum by means of technology development. According to UNEP “a more sustainable economy requires an absolute reduction in resource use at a global level, while human well-being demands that economic activities should expand and environmental impacts diminish” (UNEP 2011b, 8). Thus, the aim of UNEP is to come up with strategies for how the positive factors of economic growth and social progress can be *decoupled* from excessive use of resources and energy that cause increased climate gas emissions (UNEP 2011, 2). According to UNEP (2011b, 4) a continuation of the present material consumption trends will result in a tripled resource use by 2050. This is why decoupling is such an urgent matter for UNEP.

### **5.2 UNEP's View on Decoupling**

Decoupling means, as mentioned before, that the graph of economic growth is decoupled from the graph of negative factors concerning the environment, e. g. the factor of excessive and uncontrollable climate gas emissions. Furthermore there is a distinction between 'relative decoupling' and 'absolute decoupling'. The former describes a state where the growth rate of resource use and impacts is lower than the economic growth rate. The latter refer to a state where the economy is growing and the resource use and impacts is declining (UNEP 2014). In the case of the climate crisis it is important to stress that the conventional growth economy is dependent on an *absolute decoupling* to obtain global objectives as the two degree target. Relative decoupling is in no case sufficient.

There has been a spontaneous relative decoupling through the 20th century. Hence, the use of material resources has grown at lower pace than the global economy (UNEP 2011b, 19). According to the statistics, relative decoupling, and to some extent absolute decoupling, are already happening in developed economies. Moreover, this fact is often used as a favourable argument for those who believe absolute decoupling is a reachable prospect globally. Another positive indicator, in regard of decoupling, is that the material intensity declined with 25% from 1980 to 2002, from 2,1 tons per 1000 USD to 1,6 tons. This trend is rendered possible by innovations in sectors as communications technology, new materials, more efficient production methods and more education (UNEP 2011b, 48). UNEP's aim is to speed up these processes substantially to obtain an absolute decoupling globally.

UNEP does also mention some factors that weaken the positive content of the statistical observations about decoupling. For instance, countries like Germany and Japan, which have had success with relative decoupling, still rely on goods produced abroad using major amounts of energy. In other words, they 'export' their high intensity energy use. Therefore, it is easy to misinterpret the positive results from developed economies. Their reduced use of energy and their reduced climate gas emissions have to a large extent been compensated for by their increased demand of goods from other countries (UNEP 2011b, 2). Another problem is that increased resource productivity, statistically and historically, leads to more consumption, which, moreover, results in increased climate gas emissions. In the climate policy setting this phenomenon is called the 'rebound effect'. This means that increased productivity leads to accelerated economic growth that generates more use of resources (UNEP 2011b, 14). Thus, the policy makers also have to overcome the rebound effect to succeed with their strategy of increased resource productivity.

Nevertheless, UNEP believes it is possible to change the direction of the economy and the world through reforms. Firstly, the concept of *innovation* has to be renewed. The old and conventional concept is too focused on economic growth and does not pay sufficient attention to the dimensions of decoupling, UNEP asserts (2011b, 35). In this regard, UNEP calls for a second generation of innovation policies and investments that focus thoroughly on resource productivity (UNEP 2011b, 36). Furthermore UNEP emphasizes that the economy is a 'learning-economy', not a 'knowledge-economy'. This implies that it is possible, and necessary, to improve the system of economy continuously. For instance, this can be done by modifying economic institutions and their relation to concepts as cohesion and solidarity, according to UNEP (2011b, 36-37). "Changes in the system level offer the most effective way to achieve decoupling" (UNEP 2011b, 37). Thus, their claim is that the economy should not be considered as a settled system that cannot be altered and reformed. The last assertion of UNEP has resemblance to the content of Strong Sustainability.

The adherents of Strong Sustainability, though, believe growth economy and the project of absolute decoupling is an impossible prospect. According to them, the crucial task is to contest and remove the growth constraint of the economy. Without such a structural change of the economy it is impossible to achieve absolute decoupling, is their claim. As we have seen in this example, UNEP does also call for changes at the system level. However,

their suggested changes of the system seem to presuppose the continuation of the growth constraint in the economy. Therefore, the adherents of SS allege that the policy makers of UNEP and Weak Sustainability leave out the most important aspect in respect of solving the climate problem. The opponents' position will be elaborated in the next section.

The policy makers of UNEP consider continued economic growth as a premise in their work. According to them the growth economy is required in order to provide future welfare and lift people out of poverty. However, in regard of the climate crisis, they acknowledge that a continued growth requires a revision of the growth economy. The economic growth has to be *decoupled* from the synchronous increasing climate gas emissions and environmental deterioration. Despite some positive trends regarding decoupling, UNEP admits that there are substantial obstacles to achieve the objective of absolute decoupling. For instance, 'export' of emissions and the rebound effect are certain hinders. They do, however, believe that these obstacles can be overcome by policies. The new policies have to be less committed to the growth constraint and more committed to the aspect of resource productivity, UNEP asserts.

### ***5.3 Critique of Green Growth and Decoupling***

“Unless growth in the richer nations is curtailed, or some kind of completely unforeseen technological breakthrough happens, the carbon implications of a shared prosperity are truly daunting to contemplate” (Jackson, 2009, 85-86).

As we have seen in the previous section, UNEP's decoupling project is still an incomplete strategy. Still, UNEP believes it is the right strategy to pursue. I shall now present the main critique of Strong Sustainability towards Green Growth and the premise of decoupling. In Jackson's opinion it is hard even to imagine how the principle of growth and the factor of population growth can team up with the premise of large scale abatement of climate gas emissions. Through a thorough elaboration of the relevant factors in the case of decoupling he gives a plausible account for why this strategy should be rejected. UNEP's strategy is also criticized, more subtle though, by Arvesen et al. at the Department of Industrial Ecology at the Norwegian University of Science and Technology (NTNU). The researchers allege that the policy makers have a too simplistic attitude towards the problem at hand and call for alternative strategies. “If the optimism on behalf of technological solutions is misconceived, scholars and policy makers must start now to explore ways in which

mitigation can be realized also through alternative avenues” (Arvesen et. al. 2011, 7453) Moreover, they believe the present approach leads to an unrealistic technology optimism in regard of the climate gas abatement targets. Both Jackson and Arvesen et al. call for an alternative strategy that challenges the foundational premises of the economy. Their message is that this is the only realistic opportunity for a sound solution to the climate problem. Further I shall give an account for Anders Arvesen et al.'s (2011) survey of under communicated negative factors of technology optimism, thereafter I will present Tim Jackson's (2009) argumentation against Green Growth and the idea of decoupling.

### ***5.3.1 Arvesen et. al.***

According to Arvesen et al., an underlying premise for the present discussions about new climate policies is that the energy efficiency is continuously increasing. Furthermore, the policy makers believe that a green shift in the energy sector will be a sufficient mean for mitigating the climate change to an extent that is consistent with the target of limiting global warming to two degrees Celsius above the pre-industrial level (Arvesen et. al. 2011, 7448). However, the authors' claim is that this attitude is too simplistic. According to them, this approach leaves out certain underlying societal driving forces that have negative effects on the climate gas emissions. For instance, increased consumption and population growth are factors that are not addressed sufficiently in this conventional approach, Arvesen et. al. assert. According to the authors' assessment, these and similar factors will, most likely, have an indirect and negative effect on the climate gas emissions. This negative effect is not accounted for in the conventional approach among policy makers.

In other words, Arvesen et al. criticize policy makers for overlooking certain problems in their assessment of the factor of technology and growth economy. Their concern about indirect effects is illustrated by the 'ripple effect'. When you drop an object into a pond the water level will be reduced at the hitting point, but the ripples will cause a higher water level somewhere else. This allegory depicts how the assessment of decoupling, at the moment, overlooks certain possible side-effects of the decoupling strategy. If you assess the effects in isolation from the ripples, or side effects, you may end up with an underestimation of the aggregated emissions in the mitigation measurement. Conversely, this can lead to an overestimation of our ability to mitigate the climate change by technological means, the authors assert (Arvesen et. al. 2011, 7448). Their claim is that the present mitigation

assessments are based on unfounded technology optimism. According to them the policy makers are overly optimistic.

Moreover, they provide six aspects which the policy makers overlook in their assessment. Firstly, they claim that a transition to 'clean' energy will by itself cause climate impacts. Less use of fossil fuel does not imply zero greenhouse gas emissions, they assert (Arvesen et. al. 2011, 7449). Substitutes like solar panels will also lead to some emissions, for instance in the manufacturing process. Furthermore, according to the researchers, 'Life Cycle Assessment' is the preferred method for assessment of the environmental impacts of different practices. However, there are certain limitations for this method as well, the authors assert. One problem is that we have to set a limit on how many connected activities that will be described in the analysis. For instance, one survey shows that conventional life cycle assessment (LCA) misses out 30% of the total environmental impacts (Arvesen et. al. 2011, 7449). The article also asserts that the LCA ignores the aspect of background economies. For example, a profound expansion in the use of windmills will require updates in electricity infrastructure and energy storage technologies that lead to climate gas emissions. Moreover, such projects will also require back up fossil power plants that can help us out when the weather is too still.

These examples indicate that there are several factors caused by the transition from fossil to clean energy that is uncounted for in the emission measurement. Another similar negative side effect of increased energy efficiency is labeled *rebound effects*. This aspect cannot be neglected, is the author's claim (Arvesen et. al. 2011, 7450). "Rebound effects come into play when increased efficiency leads to reduced costs" (Arvesen et. al. 2011, p. 7450). The problem is that reduced costs can lead to new demands for energy through increased consumption. Arvesen et al. believe this effect is under-estimated in present mitigation assessments. Reports suggest that a rebound effect caused by increased energy efficiency in developed countries leads to a 10-30% gain in consumer end-uses. We have to ask if rebound effects can be linked directly to the driving force of economic growth at the macro level of the economy, they assert. Furthermore, according to some theoreticians, energy itself, together with labor and capital, is a necessary premise for economic growth that interacts with the factors of labor and capital (Arvesen et al. 2011, 7451). If this is correct, it will strengthen the argument which holds that large rebound effects will occur, Arvesen et. al

claim. Due to the prospect of rebound effects energy efficiency strategies will fail to live up to the alleged expectations.

Another overrated aspect of technology development is the implementation of Carbon Capture Storage, Arvesen et. al. allege. “Developing fossil energy with CCS [Carbon Capture Storage] and renewable energy in parallel may lower system-wide performance” (Arvesen et. al., 7451, my brackets). This phenomenon can be described as a 'carbon lock in' and refers to a situation where greenhouse gas saving projects are hindered due to several forces in the existing fossil-based infrastructure (Arvesen et. al., p. 7451). The existing fossil system will to some extent preserve the old fashions and slow down the transition to renewable, is their claim. “The forces adding to lock-in may be of technological, institutional or social nature” (Arvesen et. al., p. 7451). The authors use a scenario where fossil energy with Carbon Capture Storage (CCS) is co-evolved with renewable energy to explain the problem. The risk in this scenario is that the established forces, constituted by the fossil infrastructure, will be maintained and exerted. One factor that contributes to the 'lock in' can be network effects, Arvesen et. al assert. This means that there can be dependencies among industry actors, for example complimentary products, that create barriers for new renewable solutions (Arvesen et. al., p. 7451). The authors do not reject CCS as such, but they allege that the implementation of this technology will undoubtedly raise barriers for renewable energy, and hence reduce the positive climate gas mitigation effect of the technology development.

Lastly, Arvesen et. al. direct their attention to the aspect of decoupling. According to them “[t]he notion of absolute decoupling is not supported by historical records” (Arvesen et. al., p. 7452). The authors criticize the common and optimistic view on decoupling. The arguments for the prospect of absolute decoupling are too simplistic and overlook historical trends, they assert (Arvesen et. al., p. 7452). The proponents of the decoupling strategy use the evidence of relative decoupling to justify an optimistic attitude towards technological fixes and absolute decoupling, they allege. However, according to Arvesen et. al this approach is problematic. Firstly, the conclusions are drawn from insufficient data, they assert. For instance, the evidence of relative decoupling is weakened when we take international trade into account (Arvesen et. al., p. 7452). Another problem is that the historic records provide no evidence for a development that will lead to an absolute decoupling. “The ability



of current financial systems to foster sufficient long-term investments in sustainability is yet to be demonstrated” (Arvesen et. al., p. 7452).

In the article by Arvesen et. al. decoupling is one out of six underestimated factors overlooked by the policy makers in their assessment of the factor of technology. However, it is important to note that all of the six factors can be looked upon as obstacles for the decoupling strategy. Absolute decoupling relies on a large scale shift in the technology efficiency, and all of the six factors reveal uncertainties and obstacles that hamper such a shift. Tim Jackson's writings elaborate the expressed concern of Arvesen et. al about decoupling.

### ***5.3.2 Tim Jackson***

Tim Jackson does not have much faith in the decoupling strategy. When we take key factors as the principle of growth and population growth into account it is hard to imagine how this project can succeed, Jackson alleges. His claim is underpinned by a thorough examination of the decoupling strategy. Jackson uses the built in premises of the strategy, the premise of continued growth and the premise of substantial abatement of climate gas emissions, and gives an account for what kind of societal changes that are required to fulfil the climate objectives.

Firstly, Jackson stresses that we are obligated to achieve an 'absolute decoupling' to achieve the demanding mitigation objectives of 50-85 per cent reductions in carbon emissions by 2050 set by the Panel of Climate Change (Jackson, 2009, 67). However, Jackson argues, it is hard to find any coherent evidence for that the articulated decoupling strategy can succeed. He calls it the 'myth of decoupling'. Most likely, this strategy cannot fulfil the ecological targets sought by the policy makers. Still, Jackson does not dismiss decoupling as such, though, instead he rejects the idea of decoupling within the paradigm of growth economy and Weak Sustainability.

Jackson refers to the same trends as mentioned in the UNEP reports about decoupling, for instance that the material intensity and carbon intensity per GDP unit are reduced the last years. He, as well, grants it as relative decoupling. Nevertheless, he has another assessment of the alleged potential of the decoupling strategy. Firstly, some of the positive findings in the advanced economies are reduced or neutralised by the factor of traded goods, asserts Jackson.

An example is the conventional interpretation of the emission data of United Kingdom that leaves out the emissions caused by the production of imported consumption goods, says Jackson. The assumption is that the imported goods are produced on UK's demand, and a correct assessment should therefore take these emissions into account. According to Jackson, several recent studies in United Kingdom have shown that the national measurement system fails to account for this aspect (Jackson, 2009, 73). Some of the alternative assessments, that take this aspect into account, show indeed that the aggregated emissions of United Kingdom in the period between 1990 and 2004 increased by 11 per cent. These findings contradict and contest the official result, which ascertains a 6 per cent reduction in the climate gas emissions. Therefore, according to Jackson, the alleged positive decoupling trend in developed economies as United Kingdom is to a large extent a flawed argument. Furthermore, when reading the statistics in the case of decoupling it is crucial to focus on the global scope. Within the global scope it is hard to find any results that support absolute decoupling, it is even difficult to find any certain proof of relative decoupling, Jackson claims. Moreover, the historical trend seems not to support the alleged idea that tells us that 'decoupling is already happening', Jackson asserts.

Jackson approaches the topic further by asking to what extent decoupling is technologically and economically viable (Jackson, 2009, 75). "With the right political will, could relative decoupling really proceed fast enough to achieve real reductions in emissions and throughput, and allow for continued economic growth?", he asks (Jackson, 2009, 76). His answer to this is negative. In this regard, he is criticising the present debate for being too simplistic. According to him, the present debate makes the impression that decoupling and Green Growth is an unproblematic prospect. For instance, it is common to take for granted that there is an inverted U-shaped relationship between economic growth and a decline in carbon emissions, says Jackson. This inference is dubious, and "as an escape from the dilemma of growth it is fundamentally flawed", Jackson asserts (2009, 76). According to him, the inverted U-shaped graph contains just local environmental factors as smoke and water quality; - it is not usable as an indicator for carbon emissions and resource extraction at all.

The next step in Jackson's argumentation against the decoupling strategy is to apply arithmetic theory. The acclaimed researchers Paul R. Ehrlich and John Holdren made an

equation that shows us that impact (I) of human activity is the product of three factors: the size of the population (P), its level of affluence (A) expressed as income per person, and a technology factor (T), which decides the impact of each dollar we use (Jackson, 2009, 77). When the factor of T declines we have a relative decoupling, while an absolute decoupling is dependent on a reduction of factor I. The latter phenomena can just happen if the factor of T goes down faster than the population growth (P) and income growth per capita (A) goes up (Jackson, 2009, 77).

Affluence and population growth have together been the driving force of the economic growth, Jackson asserts. Through the last 50 years this has resulted in a five-fold growth in the economy. Furthermore, in the last years the affluence aspect has become the strongest driving factor. The common understanding of affluence equals it to economic welfare. This perception is nevertheless wrong, Jackson asserts. According to him, increased income does not always lead to more welfare (Jackson, 2009, 77). The main assumption in the society is that the factors of income and population are outside the scope of what policies can address, Jackson asserts. This view has reinforced the idea that new technology is the only feasible solution to the problem. He says it is tempting to believe that more energy sufficient technology can lead to a continuously relative decoupling, which at the end will result in an absolute decoupling. However, according to Jackson's argumentation it is highly utopic.

Jackson says, through his 'rule of thumb', that absolute decoupling will occur when the rate of relative decoupling is greater than the rate of the aggregated increase in the factor of population and the factor of income (Jackson, 2009, 79). Thus, we face a challenge when we know that the carbon intensity has declined by 0,7 per cent in average the last years, while the population and the average income increased by 1,3 and 1,4 per cent. Namely, this number tells us that the emissions have increased by 2 per cent the last years. The calculation goes like this: 1,3 per cent plus 1,4 percent minus 0,7 per cent equals a 2 percent increase in the emissions.

Furthermore, Jackson sets up a spreadsheet for how much we have to reduce the CO<sub>2</sub> emissions to obtain the emission targets of IPCC. To fulfil IPCC's goals of carbon di oxide concentration in the atmosphere (450 ppm) we have to reduce the emissions by 4,9 per cent every year from now until 2050 (Jackson 2009, 79). If we project the business as usual trend

of growth from now until 2050, we will have 80 per cent more emissions at the end of the period, Jackson alleges. This development is caused by the already mentioned factors of growth in the population and income. To counter this compelling growth in emissions the technology has to become 7 per cent more efficient *every* year (Jackson 2009, 80). This means that the technology efficiency rate has to jump to a level that is ten times higher than today. According to Jackson, this fact shows the dubious, or even deceptive, character of the decoupling strategy. To make the strategy even more unattainable Jackson adds the aspect of fairness and development of poor countries to the spreadsheet. Now, the technology efficiency rate has to increase by 9 to 11 per cent each year. If we extend the period until 2100 the carbon intensity of each dollar of economic output has to be *less* than zero, Jackson asserts. To accomplish such a scenario we have to remove CO<sub>2</sub> from the atmosphere. Jackson asserts it is even hard to imagine a credible economic system with these premises. I think Jackson point is proven, the presented scenario seems to be as close to impossible as possible. Jackson thinks his line of argument reveal some pressing questions: do we really want to eradicate poverty?; are we serious about mitigating the carbon emissions?; and, are we so blinded by the ongoing paradigm that we do not dare to sum this questions up? (Jackson, 2009, 82).

#### **5.4 Summary**

Arvesen et. al. and Jackson do to a large extent reject the current strategy of Green Growth and Weak Sustainability. The growth strategy which has been pursued among the policy makers the last 25 years are, according to them, not sufficient to fulfil the objectives of sustainable development. This world view and attached policies cannot reduce the climate gas emission to the required extent, is the claim of Jackson and Arvesen et. al. In other words, the strategy of UN and the great majority of the policy makers towards a sustainable development is most likely flawed. This result suggests that the dominant world view of industrialism and growth have led to insufficient policies that are unable to solve the climate problem. Furthermore this finding suggests that the public discourse that guides the democratic activity of the policy makers have failed to take these critical objections into account. As we have seen, an overwhelming majority of the policy makers pursue the Green Growth strategy with confidence.

According to Dryzek and Spangenberg the biased attitude towards the growth strategy is a result of a lack of awareness in respect of the aspect of different world views. Moreover, Dryzek suggests that the world view of growth has obtained its dominating position by the emergence of industrialism. The claim of both Dryzek and Spangenberg is that the strong inclination among policy makers towards the world view of growth indicates that present public discourse is deficient. Summarized, the theories of Dryzek and Spangenberg suggest that the alleged gap between the policy makers' articulated effort and the poor factual results of the climate gas mitigation strategy is caused by a depreciation of alternative world views and arguments that challenge the dominant world view of growth. Jackson's and Arvesen et. al.'s harsh critique of Green Growth and decoupling supports this view: their arguments have demonstrated that the pursued growth strategy most likely cannot succeed. Hence, if the arguments of Arvesen et. al. and Jackson is correct, it is also against rational reasoning to continue unaffected on the course of growth. It is therefore worrying to see the trend among the policy makers like Jens Stoltenberg, Erna Solberg and the other Norwegian policy makers who seemingly, uncritically, pursue the course of growth.

## **6 Other Aspects that Contribute to the Climate Problem**

So, is this a sufficient explanation of the lacking results in the climate gas mitigation strategy of the policy makers? I believe this explanation provides a credible overarching account of what have been missing in the public debate about the policy makers' actions towards the problem. However, there are surely other aspects that have contributed to the disappointing results, which are not accounted for in this approach. One aspect is for instance *motivation* and *will*, which are discussed and explained through the field of psychology.

The German philosopher Dieter Birnbacher asserts that it seems difficult for the present generation to act upon a moral obligation to future generations (2015, 6). Furthermore, he asserts that there is always a gap between accepting a moral rule and actually acting in accordance with it. This tendency is especially present in the case of climate change and the alleged obligation to future generation, according to Birnbacher. Hence, regarding the lack of action; "the challenge is to identify factors that might help to motivate an agent not only to accept responsibility in the abstract but also to adopt it as a part of his moral identity and to take appropriate action", claims Birnbacher (2015, 40). To overcome this gap we have to employ indirect motivational means that resonate more with our emotional side, is his claim. Thus, the project of Birnbacher is to elucidate other non-moral emotional motivational aspects, which can be more effective in guiding our behaviour than trying to urge people to act in accordance to the moral rules (Birnbacher 2015, 41). Focusing on non-moral emotional factors as group loyalties and the love of one's children and grandchildren are examples of possible motivational aspects that can be employed, according to Birnbacher.

Birnbacher elucidates the psychological difference between rational acceptance of something and actually acting in accordance to what you have accepted, *and* the need for motivational means in order to get more action in the case of the climate problem. His claim is plausible, and can at least explain partly why we have not been able to mitigate the climate gas emissions. The Norwegian psychologist Per Espen Stoknes (2014) describes the problem in a slightly different way. Stoknes gives an account for 'the psychological climate paradox'. This term describes the discrepancy between the increasing scientific certainty about the causal connection between climate change and human activity *and* the declining public concern and prioritization in wealthy countries regarding the case of climate change (Stoknes 2014, 161). Furthermore, he gives an account of psychological obstacles that hinder action,

and, eventually, he suggests that the obstacles can be overcome by new ways of communicating the problem. Stoknes, like Birnbacher, emphasizes that there is a lack of action in the present state that needs to be addressed. However, unlike Birnbacher, Stoknes is not referring to moral obligations, but do rather claim that the strong scientific evidences for the hazards of climate change implies that it is rational to act upon the problem. Both, though, claim that the problem has to be addressed by motivational means which take the irrational aspects of human psychology into account.

I am sympathetic to Stoknes's and Birnbacher's theories, I agree with them that we need action and that we have to break out of the standstill. However, I believe it is crucial to consider the psychological approach to be subject to the rational discussions about different world views and *what* economic and political means we have to employ in order to solve the problem. Without these discussions the endeavor for more action can end up in flawed initiatives and policies. For instance, I cannot accept one of Stoknes's underlying premises<sup>3</sup>, namely that the necessary technological and political means are already available. "The challenge now is to get a majority of citizens in each democracy to support policies for implementing existing solutions" (Stoknes 2014, 168). According to this line of thought the only obstacle for a sound solution to the climate crisis is the human will, and hence the means of Stoknes and Birnbacher will likely be a sufficient mean in order to solve the problem. However, I believe this inference is too simplistic. Such a stand is problematic because it may imply that the conventional and established strategy of Green growth and the world view of Weak Sustainability are considered to be sufficient in order to solve the problem. I mean that the previous examination of the world view of WS and the Green Growth strategy have demonstrated that the right motivation do not necessarily leads to the correct action. The strategy of Green Growth and the world view of WS is most likely an unrealistic prospect for achieving SD's objectives, thus, we need to reconsider the world view and premises we stick to *before* we employ the suggested psychological means.

The psychological approach should definitely be granted a certain role in obtaining a sound solution to the climate problem: stronger motivation towards action will most likely

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3 This is a possible interpretation of Stoknes's writings and is not necessarily his point of view.

implicitly lead to more disputes about what the right actions looks like. However, my claim is that the world view of growth has to be contested before the psychological means can be successfully utilized. The main problem is, seemingly, that we are currently adhering to the world view of growth and Weak Sustainability in a dogmatic way. The public, including policy makers as well as citizens, have to adjust their conception of the problem and their world view in order to meaningfully employ the suggested psychological actions.



## **7 Conclusions**

The aim of this master thesis has been to give an account for the aspect of world views in the contemporary debate about climate policies. The examination of world views is triggered by the alleged gap between the policy makers' articulated effort in order to solve the climate problem and the factual empirical data, presented in the first chapter, showing that the climate gas emissions are continuously increasing. I have shown that most of the policy makers seem to be motivated to act upon the climate problem, and, moreover, they are seemingly adhering to the moral content of sustainable development and the obligations towards future generations. Thus, I am suggesting that the disappointing results of the climate gas mitigation strategy of ours are not solely caused by lack of motivation and moral will, but that there got to be other factors in play that contribute to the problem. Hence, Spangenberg's approach is appealing. His distinction between moral ideals and world views seems credible. The message of his theory is that the factor of world views is under-communicated in the present debate about climate policies. According to his line of thought, it is insufficient to focus solely on the factor of moral ideals. The factor of world views decides what practical means the policy makers employ in order to live up to the moral ideals and furthermore solve the climate problem. The implication of this line of thought is that two persons can be motivated by the same moral ideals, but still adhere to two substantially different world views that point out two contrasting policy courses.

Furthermore I have elaborated on Spangenberg's notion about world views through the theories of Dryzek, van den Bergh's and de Mooij, and Neumayer. The outcome of the elaboration is that the climate problem is seemingly circling around the distinction between the world views of Weak Sustainability and Strong Sustainability. The former holds that the climate problem has to be solved by the means of growth economy, while the latter believes it is the growth economy as such that are causing the problem. The theoreticians allege that these two world views have to be discussed explicitly in order to come up with effective climate policies. Furthermore they criticize the contemporary debate about climate policies for being deficient. According to them, the policy makers are mixing up the content of the two world views, which subsequently leads to a flawed understanding of the climate problem.

I have also given an account for the moral ideals that underpin the society's and the policy makers' aim of creating a sustainable development. I have suggested that the concern about sustainable development is entrenched in the values of democracy, which consist in the

values of freedom and equality and the connected human rights. I have argued that these values rely on the ideal of rationality where the partakers in democratic discussions endeavour to follow the best arguments. Hence, in light of the moral ideal of democracy, I have suggested that the policy makers seem morally obliged to take relevant arguments into account in the debate about climate policies.

Furthermore, I have examined the attitude of Norwegian policy makers towards world views. The empirical examples have demonstrated the dominant position of the world view of Weak Sustainability (WS). A huge majority of politicians and bureaucrats are adhering to and are promoting the world view of WS with confidence. Conversely, the world view of Strong Sustainability is largely ignored by the policy makers. I have also suggested, through the theory of Dryzek, that the prominent position of the world view of growth and Weak Sustainability stems from industrialism. The historical background partly explains the biased attitude among policy makers towards Weak Sustainability.

Lastly, the assessment of the strategy of Green Growth and the world view of Weak Sustainability has demonstrated that this course most likely cannot solve the climate problem. Jackson and Arvesen et. al. concludes that it is founded on dubious premises. If one adds this to the fact that a huge majority of the policy makers pursue this strategy, it is highly unlikely that one will be able to solve the climate problem in the foreseeable future. Furthermore, this indicates that the policy makers are not entitled to follow the world view of Weak Sustainability with such confidence: they are seemingly failing to act on the rational grounds, which democracy consists in. Summarized, the aspect of world views seems to be the crucial aspect to investigate further in order to come up with effective climate policies that can solve the climate problem. It seems obvious that the policy makers should direct more attention towards the world view of Strong Sustainability.

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