

# Anarchy, State, and the Environment

*Will a libertarian be able to handle an environmental crisis?*

Bachelor Thesis

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**Abstract:** Humanity faces some severe problems when dealing with the environment: rising temperatures, sea levels and concentrations of pollutants in the air. State intervention seems almost unavoidable when dealing with these kinds of problems. Robert Nozick was extremely careful when it came to delegating power to the state. The question that is asked and answered in this paper is what limitations of Nozick's theory are exposed by environmental problems and how this theory can be adjusted to deal with these problems. Nozick's theory turns out to be surprisingly flexible. The Lockean proviso can be used to deal with CO<sub>2</sub> emissions, the principle of fairness to implement preventive measures.

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# 1. Introduction: Climate Change

## 1.1 Changes and implications

According to a 2007 report of the International Panel on Climate Change (IPCC) that discusses the scientific basis of our knowledge about natural and human contributions on climate change, carbon dioxide (CO<sub>2</sub>) is the most important anthropogenic (i.e. driven by human action) greenhouse gas (GHG), and the current atmospheric concentration of CO<sub>2</sub> by far exceeds the normal value of the last 650,000 years. This increased concentration is mainly caused by an increased use of fossil fuels, and somewhat less by a different land use. Other greenhouse gasses that had an increased concentration are methane and nitrous oxide. Of all these gasses it is at least very likely (>90%) that human action contributed to or caused the increasing concentrations. If this is true, we (as human beings) are responsible for the climate change and, more important, we can do something about it. In this thesis I want to discuss what the role of the state can be in this process.

The increased atmospheric concentration of GHG's goes hand in hand with rising temperatures. Eleven of the twelve years from 1995-2006 ranked among the twelve warmest years since 1850. The increased temperatures have a broad range of consequences. First of all, ocean temperature rises, which causes the ocean water to expand. This leads to a rising global sea level. Second, due to the higher temperatures mountain glaciers and snow cover have declined on average in both hemispheres. This very likely (>90%) contributed to sea level rise. The global average sea level rise was 1.8 mm (1.3 – 2.3) per year for the years 1963-2003 with the highest rates measured in the last decade of this period.<sup>1</sup>

Across the globe numerous other long-term changes in climate have been observed, such as an increase in all forms of extreme weather (droughts, heavy precipitation, heat waves, and tropical cyclones). It is remarkable to see that some areas get dryer (Sahel, Mediterranean, southern Africa, parts of southern Asia), while other parts of the world face increased precipitation (North and South America, northern Europe, and northern and (parts of) southern Asia). Human contribution to these trends is at least more likely than not (>50%).

Overall, it is very likely (>90%) that the pattern of climate change is not due to natural forces alone. The expectation is that the process of change will continue in the future, with an

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<sup>1</sup> Climate Change 2007: The Physical Science Basis (IPCC)

expected rise of 0.2°C for the two upcoming decades. The expected changes in the 21st century will most likely be larger than those in the 20th century.

## **1.2 Risks and vulnerability**

In another report<sup>2</sup> the IPCC discusses the impacts of, vulnerability for and adaptation to climate change. The effects of climate change directly affect the safety of millions of people in many ways. There will be more rock avalanches in mountain areas, and in many areas the warming of lakes and rivers will affect the water quality. Overall there will be large changes in the biological structure of the earth, with different behaviour of plants and animals due to changing circumstances, such as changing seasons. According to the authors “it is likely that anthropogenic warming has had a discernible influence on many physical and biological systems”.

Further effects, with medium confidence, are on agricultural and forestry management in the northern hemisphere and on human health due to higher heat-related mortality, infectious diseases and allergenic pollen in the northern hemisphere. The authors also mention the fact that in mountainous areas dams had to be built as a result of possible lake outbursts due to melting waters from glaciers. In parts of Africa the length of the growth season is significantly reduced and coastal areas are confronted with a rising sea level.

In the future the effects will be even bigger. In general, wet areas become wetter, dry areas become drier. Areas that rely on melting water of glaciers will be confronted with shortages when these glaciers are gone. In the 2080s, millions of people are projected to be flooded every year, especially in the lower delta areas of Africa and Asia.

Climate change will also affect the ecosystems. 20-30% of animal and plant species will risk extinction when the temperature keeps on rising. Climate change will also affect species' geographical ranges. All this will reduce the availability of goods and services from the ecosystem, such as food. In some areas, the crop production will rise, while on other areas crop production will decline. Some of these areas already face a food shortage.

Climate change will also affect health. Some examples are: an increase in malnutrition and consequent disorders affecting child growth and development, deaths due to large natural disasters, increased burden of diarrhoeal disease and an increased frequency of cardio-respiratory diseases due to an increased concentration of ozone. There will also be some

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<sup>2</sup> Climate Change 2007: Impacts, Adaptation and Vulnerability (IPCC)

positive effects, but they will be, dependent on the location, most likely outweighed by the negative effects. However, “critically important will be factors that directly shape the health of populations such as education, health care, public health initiatives and infrastructure and economic development”<sup>3</sup>.

The consequences of climate change differ per continent. In general it can be said that climate change worsens the already existent problems. In Africa, agricultural production will decrease, and coastal areas will be affected by sea level rise. Africa is regarded as the most vulnerable to climate change, both because the consequences are more severe and its low adaptive capacity. However, problems occur on each continent.

As a result of climate change we face some characteristic problems. First of all, it is so complicated that it is almost impossible to blame someone in particular. Even if we can blame someone, the question remains: to what extent? Furthermore, even though we are quite sure that human action is somehow involved in climate change, we cannot be sure that there are no natural causes (such as sun spots) and natural processes that gravitate the impact of human behaviour. And finally climate change requires a global approach since the climate change is global and human actions have a global impact. Most economists and politicians agree that with these kinds of problems the state has an important role to play. But is state action in these cases justified and if so, what forms of state intervention are allowed? In this thesis I will discuss one of the possible answers to these questions: the ideas of Robert Nozick.

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<sup>3</sup>*Ibid.* , p. 12

## 2. Introduction: Robert Nozick

To get more insight in the role of the state in problems like climate change I will reflect on them using the political ideas of Robert Nozick. Robert Nozick (1938 – 2002) was a philosopher at Harvard University. He wrote extensively on several topics, such as rationality and epistemology, but he is best known for his political theory, developed in his famous book *Anarchy, State, and Utopia* (1974).

In this book Nozick develops a libertarian theory, defending the minimal state (and nothing beyond the minimal state). It was written as a reply to John Rawls's *A Theory of Justice*, which was published a few years earlier (1971). His theory is based on the idea that people have inalienable rights in the state of nature, which by cooperation develop into the minimal state. I will further explain his ideas in the theoretical framework.

As a state could hardly be more minimalistic than it is in Nozick's conception, the combination with environmental problems (that seem to require more state intervention than possible in the minimal state) is exciting and interesting. It is hard to deal with Nozick's complete theory when space is limited, so I decided to focus on some, what I believe to be, major issues related to the topic of this thesis.

Although the interest in Nozick's ideas has declined over the years, his ideas are still relevant today. He is one of the political philosophers that justify the existence on the state as such. Most theories seem to argue that because some activities of the state are beneficiary, the existence of the state is justified. This is a very pragmatic view, and though it makes sense, it is always good to reflect on different views.

### 3. The research

This thesis is not meant to provide detailed solutions for the problem of climate change. The goal is to reflect on Nozick's theory and see what the limitations are when dealing with problems that come with climate change and comparable issues. As a result of this reflection I will provide a possible way to tackle this problem within the framework of Nozick. I formulated the following research question:

*What limitations of Nozick's theory do environmental problems show us and how can his theory be adjusted/ sharpened?*

There are different problems we face when we deal with environmental problems. I have highlighted three of these problems:

1. It is uncertain who caused the environmental problems.
2. Environmental problems are not caused by human behaviour, but are only caused by natural circumstances: in this case, we have no one to blame.
3. We know who we have to blame, but action is difficult because it is a global problem, while we have to deal with many sovereign countries.

Each of these scenarios represents a possible problem when dealing with environmental problems, but also touches at the borders of Nozick's ideas. The first scenario does this because Nozick seems to assume that we always know who caused the harm to whom. To deal with this, we will employ the Lockean proviso (further explained in the theoretical framework).

The second scenario is problematic for Nozick, because he only deals with human actions. To elaborate on this we will take a closer look at the principle of fairness (see theoretical framework).

The third scenario is not about the content of policy, but about the execution of it. How can we implement the policy in the best way? Since this is not a major concern for Nozick and more a matter of expediency than of theory, I will not discuss this part lengthily, but only give a short overview.

In three parts I will discuss each scenario, answering three questions for the first two scenarios:

1. What is the exact problem?
2. What solutions does Nozick offer and why are these solutions (partly) insufficient?
3. What can we do within Nozick's framework to deal with this problem?

The third scenario will be discussed shorter, since this is almost ignored by Nozick as a theoretical problem and regarded as a matter of practice. This means there is not so much to say about it, except that this is a problem. This means I will only explain the exact problem and Nozick's (limited number of) ideas about this.



## 4. Theoretical framework

### 4.1 Nozick: the minimal state derived

I will discuss the ideas of Robert Nozick to reflect on climate change and comparable problems. Nozick has some very characteristic ideas and at times he defends these ideas in an original way.

Nozick chooses a starting point which he shares with famous political theorists like Hobbes, Locke and, more recently, Rawls: the state of nature. Nozick stands in a Lockean tradition in particular: he explains what the state of nature entails mainly by quoting Locke's *Two Treatises of Government*. In the state of nature "individuals are free to order their actions and dispose of their possessions and persons as they think fit, within the bounds of the law of nature"<sup>4</sup>. The law of nature prescribes that "no one ought to harm another in his life, health, liberty, or possessions."<sup>5</sup> If anyone is violated in his rights he is allowed to defend himself (or others). The harm done to the offender must of course equal the harm done to the offended.

However, there are "inconveniences in the state of nature"<sup>6</sup> for which civil government is the right remedy. Locke (and with him Nozick) believes individuals will structurally overestimate the harm done to them and give themselves the benefit of the doubt. Thus the enforcement of rights will lead to endless series of feuds, acts of retaliation and compensation. The state of nature easily turns in to a state of limitless violence and conflict. Furthermore some individuals may not be able to enforce their own rights, leading to a situation in which the weaker are dominated by the stronger.

In the state of nature people will not stand alone when defending their rights. Other will join them in their defence because they are his friends, owe him something or are public spirited. Groups will form mutual protective associations: 'in union there is strength'. However, these protective associations come with two inconveniences. First, everyone is always on a call to serve a protective association, and second, as every member may always call out his associates, a paranoid within the group is annoying. Even worse, a member may use the force of the group to violate other's rights. Furthermore, what to do when two members are in dispute?

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<sup>4</sup> Locke; *Two Treatises of Government*. Second treatise, sect. 4. As quoted in *Anarchy, State, and Utopia*. p. 10

<sup>5</sup> *Ibid.* sect. 6

<sup>6</sup> *Ibid.* sect. 13

According to Nozick, to solve the last problem a protective association will use some procedure to determine how to act when a dispute between members occurs by finding out which claimant is correct. This is a legal system in its most basic form. This procedure will also be used to determine whether a member's rights were really violated by a non-member. The problem of always being on call can be handled simply by introducing some form of a division of labour or just by hiring someone to do the dirty jobs.

Initially several protective agencies will be active within the same geographical area. However, when protective agencies disagree on a certain case problems occur. Imagine a situation in which one agency protects the rights of his member, while another agency, convinced that he violated the rights of one of his members, tries to punish him. This would surely lead to a nasty situation. Therefore, in one or another way, each agency will end up having a virtual monopoly within a geographical area. This Nozick calls the dominant protective agency (DPA).

Thus "out of anarchy, pressed by spontaneous groupings, mutual-protection associations, division of labor, market pressures, economies of scale, and rational self-interest there arises something very much resembling a minimal state or a group of geographically distinct minimal states".<sup>7</sup>

Nozick stresses that the DPA will not only be the only protective agency in a certain area, it will also have a de facto monopoly. The DPA considers only his own procedures to be just and right, and thus it will prohibit independents to force their own rights against a member of the DPA according to the independent's own procedure. The monopoly is therefore de facto: it is not a de jure monopoly granted to them by some exclusive right. The legal procedure of the DPA will be the only procedure in their area, but to offset the loss of the independents due the fact that they are no longer able to defend their rights members of the DPA are forced to compensate them.

The least expensive way to do this is by simply supplying them with protective services of the DPA. The legal procedure ends up being the only one allowed in the area, and the DPA protects almost everyone in their area (except the ones deliberately choosing not to use their services). Nozick claims that now he has provided an invisible hand explanation of the state.

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<sup>7</sup> Nozick; Anarchy, State, and Utopia. p. 16

The last important point that has to be stressed in this general introduction to Nozick's theory is his emphasis on side constraints. Moral concerns should not be made a goal. Would this be the case, individual rights would be treated like a "utilitarianism of rights": the goal would then be to minimize the infliction of rights. Nozick on the other hand incorporates individual rights as side constraints. This means that, in the pursuit of your goal, you are not allowed to violate other's rights. The rights of other individuals thus limit the set of actions you may choose from to achieve your goal. This also applies to social goals (such as a better environment): "there is no moral outweighing of one of our lives by others so as to lead to a greater overall social good".<sup>8</sup>

## 4.2 Problems

Of course Nozick's argument is not always clear, complete and sound (just as every other theory is imperfect). I have chosen some elements of Nozick's theory that are open for discussion and also linkable to environmental problems like the ones I have mentioned in the introduction. The first is the so-called 'Lockean proviso'.

### 4.2.1 The Lockean proviso

The Lockean proviso is based on Locke's ideas on the acquisition of property. According to Locke, we make something our property when we add our labour to it, because my labour is truly mine:

*"Though the earth and all inferior creatures be common to all men, yet every man has a 'property' in his own 'person'. This nobody has any right to but himself. The 'labour' of his body and the 'work' of his hands, we may say, are properly his. Whatsoever, then, he removes out of the state that Nature hath provided and left it in, he hath mixed his labour with it, and joined to it something that is his own, and thereby makes it his property."*<sup>9</sup>

So, when I grab an apple, it will be mine because I added my labour to it. However, this acquisition is not unlimited. Locke adds a restriction which is called the Lockean proviso:

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<sup>8</sup> *Ibid.* p. 33

<sup>9</sup> Locke; Two Treatises of Government. second treatise, sect. 26

*“For this ‘labour’ being the unquestionable property of the labourer, no man but he can have a right to what that is once joined to, at least where there is enough, and as good left in common for others.”<sup>10</sup>*

So, when acquiring property by adding labour, I have to leave enough for the others. Nozick elaborates on this principle. Nozick interprets Locke’s proviso by forbidding us to worsen the situation of others. Nozick distinguishes a stronger and a weaker variant of this principle. The stronger variant forbids actions by which another individual loses “the opportunity to improve his situation by a particular appropriation or any one”.<sup>11</sup> The weaker variant forbids actions by which individuals are no longer “able to use freely (without appropriation) what he previously could.”<sup>12</sup> It is not clear whether Locke intended the strong or the weak version. This still leaves us some problems: “Lockean appropriation makes people no worse off than they would be how?”<sup>13</sup> Nozick does not discuss further in any detail how we could determine where this baseline would be.

Nozick rejects the more stringent interpretation of the proviso, and furthermore adds that the likelihood that the proviso actually will come into effect is very small. The proviso would, for example, exclude someone from appropriating all the drinkable water in the world. However, as one person acquires more of a certain substance, the price of the remaining will automatically go up and thus make it very hard to obtain all of it.

To discuss the case of the appropriation somewhat further, a person is not allowed to appropriate the only source of water in a desert, and if it happens that all the water in the desert dries up, except the water in his oasis, he is not allowed to charge whatever he wants for that water. In a case of catastrophe, the rights of the owner (which still exist) are overridden by the Lockean proviso.

#### *4.2.2 Lockean proviso: discussion*

Nozick believes that the Lockean proviso will not be violated that much in practice: “the question of the Lockean proviso being violated arises only in the case of catastrophe”<sup>14</sup>, and “the free operation of a market system will not actually run afoul of the Lockean proviso”.<sup>15</sup>

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<sup>10</sup> *Ibid.*

<sup>11</sup> Nozick; *Anarchy, State, and Utopia*. p. 176

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.* p. 177

<sup>14</sup> *Ibid.* p. 181

<sup>15</sup> *Ibid.* p. 182

The question is when we may talk about a catastrophe and, more important, what do we have to do in case of disaster according to the Lockean proviso? I will discuss this question when dealing with the first scenario, in which it is uncertain who caused the harm. It is not at all impossible that the collective human action will end up in a worldwide catastrophe. I think it is possible to apply the Lockean proviso to such cases. This allows us to justify state action in case of accumulated action causing harm that cannot be compensated for.

#### *4.2.3 The principle of fairness*

Nozick discusses a principle of fairness suggested by Herbert Hart. Nozick describes this principle: “this principle holds that when a number of persons engage in a just, mutually advantageous, cooperative venture according to rules and thus restrain their liberty in ways necessary to yield advantages for all, those who have submitted to these restrictions have a right to a similar acquiescence on the part of those who have benefited from their submission”.<sup>16</sup>

If one accepts the benefits, this is enough to bind one to the agreement. This would abandon all free rider problems, since any free rider accepts the benefits and is thus forced to contribute according to this principle. Nozick agrees that this would contribute to the rate of success of cooperative actions, but he insists that we should carefully examine this principle, since it seems to make unanimous consent to a coercive government in a state of nature unnecessary. Furthermore, during his argument to justify the minimal state Nozick emphasized that no new rights emerged on a group level. However, in this case a new right arises on the group level: the right to force free riders to cooperate.

#### *4.2.4 Principle of fairness: discussion*

It is clear that Nozick abandons the possibility of a principle of fairness a bit too soon. “A common line of attack on Nozick's position is to argue that, for one reason or another, Nozick's examples do not illustrate cases in which the principle of fairness is applicable, and thus do not illustrate cases of the failure of the principle”<sup>17</sup>. His argument is far too simple to get rid of the principle of fairness and his examples are not always very accurate (i.e. after reading Nozick’s arguments, I am not convinced that something as influential as the principle of fairness should be abandoned forever).

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<sup>16</sup> *Ibid.* p. 90

<sup>17</sup> Lowe, S. C. (1996). Free Riders, 'Fair Share,' and the Principle of Fair Play, p. 53

Besides that, when rejecting the principle of fairness, Nozick does still not provide a solution to the free rider problem. Free riders are people that benefit from the efforts of others without contributing their fair share in the costs. Free riding can result in a sub-optimal situation in which people are not willing to invest what they actually would if there were no free riders, since they do not want others to benefit from their efforts.

Since Nozick's criticism on the principle of fairness is incomplete and he is not capable of solving the problem the principle of fairness solves, it is justified to reconsider the principle of fairness: is it really impossible to incorporate some principle of fairness in Nozick's ideas on the minimal state?

I will link this problem to the second scenario, in which the environmental problems are not caused by human action, but just some fatal twist of nature. In this case it is likely that we would like to defend ourselves against the effects of environmental problems (or even prevent them, if that would be possible), but unlike the first scenario, there is no one we can blame, and thus we cannot force the perpetrator to pay. We will have to pay for it ourselves, and here the free rider problem comes in. How do we decide who has to pay?

## 5. Uncertainty: the Lockean proviso

### 5.1 The problem

The first scenario I will consider is a scenario in which it is known that some individuals are harmed, but unknown who has done it. There is someone to blame, but who? This is a scenario occurring a lot when dealing with environmental problems. It is almost certain that, to some extent, mankind is responsible for a changing climate, and millions of people will have to face negative effects of climate change. It is unknown however who is to be blamed exactly for what happened to the environment. This is problematic for Nozick, since he always seems to assume knowledge about who has done what to whom.

First of all, we do not know for sure yet to what extent human beings influence climate. For example, some scientists say that sunspots have a big influence on the temperature on earth. So this natural effect mixes with the effects of human behaviour on climate, and the overall result is a fuzzy mixture of causes and effects from which we can't distillate the exact influence of human behaviour on climate change.<sup>18</sup>

Second, even if it would be possible to measure the exact influence of human behaviour, it would still be unclear what kind of behaviour has an effect on our climate and to what extent. Next, and even more important, is the question whose behaviour causes climate change. Even if it would be known what category of behaviour is causing climate change (such as actions leading to the emission of CO<sub>2</sub>) we would still not be able to measure precisely everyone's behaviour. This would require exact registration of people's behaviour, if that is possible at all.

So, we see from climate change that a situation in which we do not know who we should blame is not a purely theoretical, hypothetical situation: it is a problem we are facing right now. In the following section I will first make an abstract inquiry into Nozick's theory to see what he can tell us about situations in which uncertainty occurs. Then I will discuss the weak points of Nozick's ideas and suggest a solution.

### 5.2 Nozick's ideas

What we see in the case of climate change is that nobody causes it individually, but the totality of actions creates a problem. Or, to put it differently: "Each individual act's

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<sup>18</sup> See for example Lean, J., Beer, J., & Bradley, R. (1995). Reconstruction of Solar Irradiance Since 1610: Implications for Climate Change.

probability of causing harm falls below the threshold necessary for apprehension, but the combined totality of acts may present a significant probability of harm”.<sup>19</sup> Nozick emphasizes that it is certainly not the case that each individual person is responsible for the resultant fear (at the side of the possible victim). Nozick also acknowledges that there is a problem when it comes to deciding to what extent one person is responsible: “Nor can any person easily be held to cause a distinguishable part of the fear”.<sup>20</sup>

Nozick links cases in which there is a probability of harm explicitly to fear, but he makes clear that fear is a mental state that can seriously harm someone, and that there is no reason to abandon any complaints about fear as being an illusion. Therefore I think we can treat the case of climate change the same way as Nozick deals with the problem of fear.

Since fear is something that causes harm we should either prohibit actions that cause fear or demand some form of compensation when that is possible. Therefore, when a totality of activities causes fear (or harms someone) there is certainly a case for the prohibition for this totality of activities. However, prohibiting this totality of activities does not mean we should prohibit every single act making up this totality of activities, since parts of the totality can occur without inflicting any considerable harm. To ban each individual act would therefore be far too stringent.

### *5.2.1 Invisible hand mechanism: Coase*

However, if we do not prohibit every individual act, we are still left with the question: “How is it to be decided which below-threshold subsets of such totalities are to be permitted?”<sup>21</sup> Nozick rejects both taxation and social determination of which activities should be permitted, since both require an extensive central planning apparatus. We could at least partially solve this problem if some ‘invisible hand mechanism’ would be there to help us out. However, according to Nozick, such a mechanism has not been described yet, and it is the question if and how this mechanism would arise in a state of nature.

One of the most famous attempts to describe such an invisible hand mechanism has been made by Coase (1960). The basic idea of Coase is that we should create property rights; to be more precise, rights to perform a certain harmful act:

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<sup>19</sup> Nozick; *Anarchy, State, and Utopia*. p. 73

<sup>20</sup> *Ibid.*

<sup>21</sup> *Ibid.* p. 74



*“If factors of production are thought of as rights, it becomes easier to understand that the right to do something which has a harmful effect (such as the creation of smoke, noise, smells, etc.) is also a factor of production. Just as we may use a piece of land in such a way as to prevent someone else from crossing it, or parking his car, or building his house upon it, so we may use it in such a way as to deny him a view or quiet or unpolluted air. The cost of exercising a right (of using a factor of production) is always the loss which is suffered elsewhere in consequence of the exercise of that right—the inability to cross land, to park a car, to build a house, to enjoy a view, to have peace and quiet or to breathe clean air.”<sup>22</sup>*

If we can determine who has the right to allow or forbid a harmful action, we can start negotiating. If someone would have a plan to build a house next to my house, he would ruin my view. The costs of building that house do not only consist of the land, the used materials etc., but he should also buy me off in order to compensate me for my lost view. Coase believes that we could solve the problem of externalities by allowing people to negotiate.

If such an invisible hand mechanism (i.e. we are guided to the optimal solution by an ‘invisible hand’ instead of a central decision body) would arise in a state of nature, at least one form of uncertainty would be solved. We would still have to know what category of actions causes environmental problems, but we would no longer have to decide on every single individual act. This would reduce the administrative burden to a large extent. However, reality is too complicated to apply the Coase theorem in a state of nature theory. The best example of the Coase theorem in practice would be the European Emission Trading System (ETS). This certainly needed a central decision-making apparatus, which has a power far beyond anything imaginable in Nozick’s framework. The solution offered by Coase again seems to assume complete information, perfect knowledge and, in more complicated cases, a central authority capable of enforcing negotiations and enforcing some form of a pricing mechanism. The idea of property rights in the case of harmful effects would in theory be according Nozick’s ideal. However, in practice it is only useful when dealing with less complicated issues.

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<sup>22</sup> Coase; The Problem of Social Cost. p. 44

### *5.2.2 Prohibition: selection criterion*

We may indeed conclude with Nozick that “actions that risk crossing another’s boundary pose serious problems for a natural right position”.<sup>23</sup> Nozick continues by considering another possible solution: determine a certain threshold to decide whether a person’s rights are violated. If we define  $p$  as the probability that someone is harmed, and  $H$  as the severity of the possible harm, someone’s rights would be violated if  $p \times H$  is larger than a certain specified value. We can indeed imagine that such a criterion is set for environmental problems based on some scientific evidence. However, in a natural rights theory this is not possible, because “that tradition does not select a threshold measure of harm as a lower limit, in the case of harms certain to occur.” So, in the case  $p$  equals 1, every  $H$  larger than 0 would be forbidden, and thus the threshold value should be set at 0, leading to a situation in which every possible harmful act is forbidden. Even in the Netherlands, where the government has a bigger role than it would have had in the minimal state, this is not the case.

Nozick considers three alternatives. In the first alternative, every action that imposes a risk of boundary crossing is prohibited; the second alternative permits these actions, provided compensation is paid to those whose boundary is crossed; the third alternative permits these actions, provided compensation is paid to all persons who undergo the risk of boundary crossing, independent of whether their boundary is actually crossed. Nozick considers the second and the third alternative more appropriate than the first. He adds one other principle: the principle of compensation. This principle says that “those who are disadvantaged by being forbidden to do actions that only might harm others must be compensated for these disadvantages foisted upon them in order to provide security for the others.” The definition of ‘being disadvantaged’ is of course somewhat disputable, but Nozick is quite clear about this. When someone sees his only way to earn a living prohibited, we should compensate him. When he only sees his most profitable way of earning a living prohibit, but still has alternative ways to do so, he is not disadvantaged relative to the normal situation.

### **5.3 Problems for Nozick**

However, this solution is still not suitable for environmental issues. Nozick does not even answer the question he asked himself: which subset of actions should be prohibited? Of course he gives some general guidelines, but in the case of climate change, applying his principles would result in absurd situations.

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<sup>23</sup> Nozick; *Anarchy, State, and Utopia*. p. 74

First, for all actions that are harmful to the environment, and through the environment harmful to men, we have an alternative. The state can prohibit individuals to drive a car, and they still would have other opportunities to get somewhere. The state can prohibit companies to use techniques that lead to an excessive emission of CO<sub>2</sub>, because there is always an alternative. These outcomes however, seem to contradict Nozick's view on the minimal state. Are we not violating an excessive amount of rights if we would follow Nozick's principle of compensation and prohibit everything that is harmful and not absolutely necessary?

Second, if the state wants to prohibit something, or ask for compensation, it still has to know the amount of actions that should be prohibited. Imagine a case in which we are dealing with what I would like to call a threshold-problem. Above a certain amount of emission, the damage is irreversible. Then we know that we can emit until we reach that threshold. However, since Nozick does not directly answer which subset we can allow and which subset we cannot, applying his principle may in one case lead to a situation in which we prohibit far too much, while in another situation we prohibit not enough, and thus cause irreversible damage.

Another problem is that we still don't know how to handle a situation in which the cause of the problems is unknown, i.e. we know that certain problems (such as floating due to rising sea levels) are caused by environmental changes. Furthermore, we know that this is caused by human action, to be more precise human action that leads to the emission of CO<sub>2</sub> in the atmosphere. But the emission of CO<sub>2</sub> is caused by billions of actions on a daily basis, performed by billions of individuals. Whose actions should be prohibited?

This problem resembles some real problems that occur on a global basis. Developing countries are unwilling to restrict their emissions, claiming that the West has had its time of unlimited emissions, and now it is their turn to emit. How are we to decide whether they are right? We know that the totality of CO<sub>2</sub> emissions is too high. But who should be limited in his actions? Nozick addresses this question but never answers it.

Nozick further elaborates on the principle compensation when considering the possibility of a preventive restraint, and again emphasizes that we should compensate those who are restricted. This would open up the possibility to restrict randomly some individuals, until we reach a point where we are below the threshold. We would of course still have the problem of deciding what exactly are the costs for them not performing an act, but that problem may be solved in the future.

Another solution would be to give everyone a right to emit a certain amount, and divide the rights equally until we arrive at the maximum amount that can be emitted without considerable damage done to the environment. If there are 100 people, and they can emit 1000 particles at max without damage, they could all have the right to emit 10 particles. This would even allow for a market to be set up, in which these rights can be traded. This is similar to the ETS, in which the rights to emit are divided among several companies. However, as we noticed when discussing this system earlier on, for the ETS to come about intervention by a state more extensive than Nozick's state was necessary. Can this also be done in the minimal state?

Answering this question basically comes down to answering another question: can we attach to every person a certain amount of emissions as a basic right, and prohibit everything beyond, unless he pays? I will, for matters of clarity, stick to the problem of CO<sub>2</sub> emissions when answering this question.

#### **5.4 Solution: emissions as a resource**

The first step to answering this question is by changing our attitude towards emissions and the guideline for this new attitude is given by Coase. We should no longer regard CO<sub>2</sub> emissions as a by-product of the actual production, as waste. It should be regarded as a factor of production, similar to capital, labour and knowledge. If we look at emissions in this way, it will no longer be output: it will be input. Further reasoning in this light would even require us to get rid of the term emission: while in a scientific sense it is indeed something we emit, in an economic sense it is something we put in to our production process.

Luckily Nozick has something to say about this. Once emissions are considered as input, it can be treated like any other resource. And if it is resource, we can apply the Lockean proviso to it. I have already explained the Lockean proviso and Nozick's ideas about it in the theoretical framework.

What does the Lockean proviso tell us about the case of CO<sub>2</sub> emissions? If we would say that, if humanity emits more than a certain threshold, a disaster would occur, it would not be a big step to say that the amount of CO<sub>2</sub> available is limited. If we have emitted all the CO<sub>2</sub> we can (if we would emit more, a disaster would occur) we have, economically spoken, 'run out' of CO<sub>2</sub>). The available stock is gone.

The application of the Lockean proviso to emissions tells us that someone is not allowed to 'appropriate' all the CO<sub>2</sub> emission in the world; this is something the Lockean proviso would forbid. Connected to the fact that in the state of nature the rights of each individual are the same, we logically arrive at the conclusion that the emission rights of CO<sub>2</sub> are equally divided among all persons in the state. If someone emits more than he is allowed we have a situation where there is not enough and not as good left in common for others. And thus the Lockean proviso forbids this act. The only way in which an individual or a company would be able to emit more would be through buying rights from other individuals who do not need their rights.

This would of course require a detailed administration in which all CO<sub>2</sub> emitting acts are registered. This, however, would lead to an enormous state apparatus that would be ineffective and far too expensive. There are also more pragmatic solutions. Here we can think of only taking care of the largest CO<sub>2</sub> emissions (for example from companies) and leave open some 'free space' used for all small emitting activities.

## 6. Natural Causes

### 6.1 Nozick's ideas

The second scenario is one in which there is no human involvement in climate change. Although most scientific evidence points at some effects of human actions on climate change, there are still alternative theories. An example of such a theory is the idea that the degree of sun activity determines to a large extent the temperatures on earth.

On a more general level the question would be: how to deal with natural disasters that just happen to us? In such a case there is no human being we can blame, and thus it is impossible to ask anyone to compensate us for our sufferings. How do we deal with these problems, and what is the role of state, if any?

The first, somewhat disappointing, remark I have to make is that Nozick has nothing to say about natural disasters. He never mentions it, he even never hints at acknowledging that natural disasters are a major factor influencing the security of people. The most easy and straightforward conclusion would therefore be that the state has nothing to do with the prevention of natural disasters. The minimal state is derived from the individual's rights in the state of nature. The rights of the individual in the state of nature only entail a right to defend himself and his friends against injustices done to him by others.

Therefore there is no such thing as a right to be defended against natural disasters. Of course everyone has a right to deal with the natural circumstances in whatever way he likes. There is no one who would have the right to forbid someone to take precautions to avoid the nasty consequences of such a disaster. It would of course be allowed for individuals to gather and decide to cooperate to take preventive measures to reduce the damage done to them by natural disasters. In such a way a different kind of state would arise, a state that deals with natural disasters instead of harm done by other persons. We will see, however, that in practice this is still problematic and therefore I will take a closer look at the possibility of preventive measures.

### 6.2 Problems for Nozick: free riding & the principle of fairness

This new state (based on preventive measures) would create a new problem: the problem of free riding. Free riders take the benefits of the efforts of others without contributing anything themselves. Imagine a group of persons deciding to bundle their powers and build a weir to

prevent the river from overflowing. It would be perfectly rational for me to decide to live behind that weir without contributing to the building of it. The people who contributed to the weir cannot prevent the weir from protecting me. If I could have the benefits without the costs, why would I ever pay the costs?

One of the solutions would be to force others to join in and bear a part of the costs. This would mean applying some kind of principle of fairness, like the one by Hart, explained in the theoretical framework.

For our current purpose it is not necessary to give every detail of Hart's argument and Nozick's counterargument. It is important to say however, that Nozick rejects this principle of fairness. There is one counterexample of Nozick that is particularly interesting. Nozick gives the example of some people in your neighbourhood who decided to institute some system of public entertainment via a public address system. As there are 365 people in the neighbourhood they decided that each person has one day a year assigned to him on which he should tell interesting stories, play music etc. over the public address system.

Imagine that over a hundred persons have done their job before you. Some days you opened your window and enjoyed the music. Do you have an obligation to deliver your contribution on your day? Certainly not, according to Nozick. Although you have enjoyed the benefits, this does not necessarily imply that the benefits weigh out the costs for you of giving up one day in order to entertain the others.

Translated to our example this means: you can enjoy the presence of a weir and benefit from it. This does not mean that the benefits of living behind a weir weigh out your costs of paying your share. You would rather not have the weir than have the weir and having to pay your share of the costs. So why does benefiting from the efforts of others create an obligation to do your part?

We could make the principle of fairness stricter by adding another condition: your benefits should be greater than your costs. For Nozick, the principle with this added condition would still be objectionable. What if all others benefit more than you do? Then it would sure be unfair if you had to pay an equal share. Or maybe you would rather have all others behave differently. Imagine you like music very much. Although the benefits of the weir are for you greater than the costs, you would rather have everyone paying for a subsidy for musicians. So

why should you contribute to the building of a weir when you would rather see you money spent on other things?

Nozick concludes “on the face of it, enforcing the principle of fairness is objectionable.”<sup>24</sup> One simply cannot give people benefits and then demand them to pay for it. If people derive more utility from another activity they have the right to spend their money on that other activity, even if the benefits of the activity you force them to do are larger than the costs.

For Nozick, there is no real solution to this problem. He admits that it might be possible to formulate the principle in such a way that it would be free from such difficulties. This principle would be so complex that it is impossible to combine it with a special principle legitimating the enforcement within the natural state of the obligations that have emerged under it.

The best way to end this part is quoting Nozick:

*“So the fact that we partially are ‘social products’ in that we benefit from current patterns and forms created by the multitudinous of a long string of long-forgotten people, forms which include institutions, ways of doing things, and language (whose social nature may involve our current use depending upon Wittgensteinian matching of the speech of others), does not create in us a general floating debt which the current society can collect and use as it will.”*<sup>25</sup>

### **6.3 Solution: the principle of fairness recycled**

One possible objection to Nozick’s stance is given by Arneson (1982). First of all he says that the principle of fairness does not apply to all goods. The counterexample given by Nozick concerning someone who gives me randomly some benefits is false, since the principle of fairness simply does not apply to this case. We have to distinguish between private and public goods. A good is public depending on the degree to which it exhibits the following three features:

- 1) the good is non-rival (the consumption of the good by one person leaves just as much for the rest of us- Arneson calls this jointness).
- 2) The good is non-excludable (we cannot prevent someone from consuming this good).

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<sup>24</sup> Nozick; *Anarchy, State, and Utopia*. p. 95

<sup>25</sup> *Ibid.*



3) All members of the group must consume the same quantity.

One should notice that once a public good is supplied there is no voluntary agreement to consume: one simply has to consume it. According to Arneson a government applies this principle just because it is practical, it is essential for a well-functioning government:

*“For practical purposes, significant variety in consumption levels is ruled out. Yet it is in virtue of providing such goods that governments acquire legitimate authority over their citizens; neither Hobbes nor Locke would say a citizen is obligated to obey a government that fails to establish minimal conditions of personal security. Hence any principle such as Hart's that is offered to explain the nature of political obligation, if it is to be interpreted sympathetically, must be taken as intended to apply to those paradigm cases of political obligation.”<sup>26</sup>*

When pure public goods (i.e. all members must consume the same quantity) are supplied, voluntary agreement is impossible and mere receipt of benefits suffices to obligate. When the good is non-rival, but excludable, we can exclude any desired person from consumption and even voluntary acceptance of benefits is insufficient to create an obligation. When exclusion is impossible but one can decide whether to consume or not, voluntary agreement of the benefits is enough to create an obligation.

Arneson tries to counter Nozick by pointing at the special character of public goods. Once such a public good is supplied and there is no coercive contribution, there are three alternatives left. We can implement private incentives so that each beneficiary is induced to contribute his share of the costs, we can forgo the benefits of the public good altogether or we can allow people to free-ride. The first alternative is unfeasible, the second and the third morally almost unacceptable. Thus, “where free-rider conduct is possible, there obligations arise, under the principle of fairness, prohibiting such conduct.”<sup>27</sup>

Arneson formulates a revised principle of fairness:

*“where a scheme of cooperation is established that supplies a collective benefit that is worth its cost to each recipient, where the burdens of cooperation are fairly divided, where it is unfeasible to attract voluntary compliance to the scheme via supplementary private benefits, and where the collective benefit is either voluntarily accepted or such that voluntary*

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<sup>26</sup> Arneson, R. J. (1982); *The Principle of Fairness and Free-Rider Problems*. p. 619

<sup>27</sup> *Ibid.* p. 623

*acceptance of it is impossible, those who contribute their assigned fair share of the costs of the scheme have a right, against the remaining beneficiaries, that they should also pay their fair share.*"<sup>28</sup>

### 6.3.1 *The self-benefit principle, cooperation, and private property*

Arneson comes up with a counterexample against Nozick's claim that the principle of fairness is false. Imagine a state of nature without private ownership. One day Smith decides to appropriate a piece of land, claiming a right of property. This right of property automatically entails a right to coerce others not to trespass on his land. To justify his claim on property Smith notes that his appropriation leaves nobody worse off, since the improvements he planned to install on the land will benefit everyone and offset the minor loss of the old free use of the land.

One day the neighbours band together and institute a police patrol, for mutual benefit. They set up a fair plan to share the costs, and furthermore add a penalty for failure to pay one's duties, coercively enforced. To justify their action they point out that it is beneficiary for everyone. They justify the coercion by claiming that it is not arbitrary, but necessary to secure this scheme. Relying on voluntary contributions is simply not feasible. To those who complain about the coercion they say that they did not actually agree on the appropriation of land by Smith, neither did they consent to the necessary coercion.

Private property backed by coercion is now widely held to be acceptable. Imagine a person Jones, being coerced by both Smith and the cooperation of neighbours. Why would the coercion by Smith be morally permissible, and the coercion by the cooperation not acceptable?<sup>29</sup> Now the question arises: what would justify the Lockean proviso of private ownership? Arneson cites Allan Gibbard, who, thinking about this question, formulated the self-benefit principle:

*"The principle behind the choice of the Lockean rule seems to be something like this: moral rules should be so constructed that, if the rules are obeyed, the acts of each person benefit or*

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<sup>28</sup> *Ibid.*

<sup>29</sup> One could reply by saying that the first instance of coercion is negative, while the second requires some positive action. However, if refraining from trespassing Smith's land means for Jones having to walk further, this argument turns out to be false. And when Smith would justify his appropriation by allowing Jones to appropriate another piece of land, the neighbours could justify their claim by allowing Jones to band together with others and impose a similar scheme.

*harm only himself, except as he himself chooses to confer or exchange the benefits of his acts.*"<sup>30</sup>

This principle should be regarded as a general guideline, not as a strict requirement; otherwise it would not justify the Lockean proviso. The idea is then that the Lockean proviso satisfies this principle more than other system of ownership. However, the principle of self-benefit does also justify a principle of fairness. Imagine a scheme in which the contributors cannot exclude anyone from having the benefits of their scheme. The greater is the number of beneficiaries who are not cooperators in the cooperative schemes, the greater is the involuntary conferral of benefits (since the benefits that belong to the contributors go, against their will, to the non-contributors). This clearly violates the principle of self-benefit.<sup>31</sup>

Allowing the cooperators to coerce others to pay their fair share solves the problem to a certain extent. The situation of the free riders is analogous to someone who protests against private property because he wants to share the fruits of the labour of the others. If we remind that the Lockean proviso safeguards to us 'the fruits of our own labour', does this not sound almost as a defence of the cooperators who force the free riders to pay, free riders who would otherwise pluck the fruits of their (the contributors) labour?<sup>32</sup>

The conclusion of Arneson is:

*"The basic idea is even simpler and more Lockean- namely, we owe a fair return for services rendered to those who supply the services. The moral intuition here is at bottom the same intuition that it is right to pay the grocer for our groceries or to pay rent for the use of land improved by the landowner, only because of the fact that collective goods come in large nondivisible chunks, coercive provision of such goods is necessary."*<sup>33</sup>

### 6.3.2 Concluding remarks

It is time for some concluding remarks. We have seen that Nozick does not directly discuss problems in which there is no one to blame. However, indirectly, he speaks about what to do

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<sup>30</sup> Arneson, R. J. (1982); *The Principle of Fairness and Free-Rider Problems*. p. 625

<sup>31</sup> A possible counterargument would be that nobody is forcing the cooperators to initiate their scheme, and there is thus involuntary transfer of benefits. This is wrong however, since in a system of free use, nobody forces Smith to plant crops and let others benefit from it, and thus the same argument would count against a system of private property.

<sup>32</sup> One could object that private property and cooperative schemes are not completely the same, since the benefits of cooperative schemes are often non-rival. However, if I would show a movie in my backyard, I am allowed to prevent others from entering my backyard and watch along, even if their consumption does not restrict my consumption.

<sup>33</sup> Arneson, R. J. (1982); *The Principle of Fairness and Free-Rider Problems*. p. 633

with cooperative schemes and free riders (which often occur if we take preventive measures against the effects of climate change. Nozick dismisses any coercive activity by the cooperators, but we have seen, following Arneson, that his rejection of the principle of fairness is based on weak (or even false) arguments. Thus, Nozick's libertarian position seems to allow us to introduce preventive measures and force everybody to pay, even if Nozick thinks otherwise.

## 7. The relation between minimal states

### 7.1 The problem

In the first two scenarios we have seen that there are solutions for the environmental problem that do not collide with Nozick's ideas. However, there is still one problem left. This problem does not concern the content of the solution, but the execution. Since this is mostly a matter of expediency (and this is how Nozick regards it, as I see it) I will not spend too much time on it. However, although it is to a large extent a practical problem, it is still a severe problem. If the content of the solution is brilliant, but it cannot be implemented, what exactly would be the benefit of all the theoretical work?

Environmental problems have a global character and therefore they require global solutions. It is impossible to reduce the concentration of CO<sub>2</sub> in the air in one country by just reducing the emissions in that country. The impact an individual country has on a worldwide scale is in most cases negligible, except maybe for countries like the USA and China. Therefore we can clearly see an incentive problem, comparable to the prisoner's dilemma: it would be optimal for all countries to reduce their emissions, but only given that all other countries do the same.

Besides the fact that an individual country's efforts will have a negligible effect on the environment, the measures taken to achieve certain environmental goal will have a negative economic effect for a country (if the same measure is not implemented by other countries). For example, if the United States decides to implement some sort of an emission trading system companies will have to pay for their emissions and will thus face larger costs. If China decides to do nothing it will gain a comparative advantage over the United States since the production costs will be lower.

### 7.2 Nozick's ideas

It is clear that a global problem requires a global solution and so in this part I want to focus on international relations, in Nozick's terms: the relation between minimal states. Unfortunately Nozick does not pay much attention to this issue and he does not provide any ground-breaking insights. However, since international relations are an important topic (especially when discussing environmental problems) it is useful to see what Nozick has to say about it.

The first important remark is that a dominant protective association has a monopoly within a certain geographical area, so there can never be two states in one area. The notion of a state is for Nozick inextricably connected with geographical borders. Nozick also talks about "a

dominant federation of protective agencies”.<sup>34</sup> Within a federation the protective agencies have agreed on rules to solve disputes among themselves peacefully. This is the model of several international organisations, such as the United Nations (UN) and the World Trade Organisation (WTO). It is theoretically possible to agree on some ways to solve the environmental problems within such organisations and Nozick would not disagree on that.

It is important to keep in mind, however, that the minimal state is in the end always sovereign and cannot be forced by other states to do something it does not want. In this sense the dominant protective association occupies a unique position by virtue of its power. It is sovereign and this sovereignty expresses itself in the power to approve and disapprove of procedures of justice. “It and it alone, enforces prohibitions on others’ procedures of justice, as it sees fit.”<sup>35</sup> A country is not allowed to force another country to implement the legislation it wants that country to have. In rare cases a country is allowed to launch a pre-emptive attack on another country if it is threatened by the actions of another country (see the section about pre-emptive attack<sup>36</sup>). I highly doubt that we can speak of such dangerous actions with the direct intent of wrongdoing when talking about environmental problems, so the possibility of pre-emptive attacks is absent.

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<sup>34</sup> Nozick; *Anarchy, State, and Utopia*. p. 103

<sup>35</sup> *Ibid.* p. 109

<sup>36</sup> *Ibid.* p. 126

## 8. Conclusion

I will now shortly recapitulate what the outcomes of my investigation into Nozick's ideas were and at the same time answer my research question: *What limitations of Nozick's theory does climate change show us and how can his theory be adjusted/ sharpened?*

I started by formulating three 'scenarios' that would possibly be problematic for Nozick. Two of them were about the content of policy measures, the third about the execution of these measures on an international (inter-state) level. In the following sections I tried to deal with these problems and find a way out.

The first scenario concerned causation: who did what to whom? We have seen that this is almost impossible to determine when dealing with environmental problems, but that we could avoid this problem by linking emissions to the Lockean proviso, treating them as a resource. By doing this we are able to justify a maximum level of emissions for each person, which makes it easier to prevent environmental disasters.

The second scenario concerned non-human factors: the possibility that climate change is just an unfortunate twist of nature. This seems at first sight somewhat problematic, since all of Nozick's ideas postulate at least one human being to blame. We could find a way out by recycling the principle of fairness – which was rejected by Nozick. By formulating this principle different and a critical review of Nozick's arguments we have seen that a principle of fairness is possible. This principle of fairness then allows us to introduce a limited amount of coercion if a measure contributes to the welfare of all.

The third scenario concerned the implementation of measures on a global scale, which is often required for the sake of efficiency when dealing with environmental problems. The conclusion is that this is for Nozick not so much a theoretical issue, but a matter of experience. Therefore it is impossible to draw strong conclusions about the third scenario.

The general lesson from this research is that Nozick's ideas are more stretchable than they seem to be at first sight. Although Nozick is very strict and minimalistic when it comes to the role of the state, we see that there certainly is a limited role for government when dealing with problems like the environmental problem. The scenarios I formulated are on the borders of his theory- and it turns out that we can find surprising insights on the borders of a theory. Maybe

his theory allows for more state intervention than Nozick would have wanted and maybe I have gone further than he would have wanted- so be it.

We have seen how theory is fine-tuned by practical problems, but what can we learn from Nozick when dealing with real problems? I believe the main lesson we can draw from Nozick -as politicians, as economists- is that there are more important things than the utilitarian cost-benefit analysis. The economic paradigm of the late 20<sup>th</sup> and the 21<sup>st</sup> century is mainly concerned with the question: does it work? In this question ‘work’ is defined as ‘the benefits are larger than the costs’. Nozick points at another dimension, giving the primacy to another question: is it allowed?

I believe that economic theory would be far more effective if economics would leave its utilitarian playground and enter the harsh, real world of morality in which not everything is allowed (and let’s be honest, economics has always been a matter of morality, more than most economists would admit). First ask the question ‘is it allowed?’ then the question ‘what is most effective, given the moral boundaries?’

Then, for politics this specific reading of Nozick would at least pull a lot of the so-called liberals and libertarians out of their easy ‘too much state intervention!-reflex’ when dealing with collective problems like the environmental problem. If even a libertarian hero like Nozick would not disagree on a limited amount of state intervention, who can be against it? *How dare any state or group of individuals do more. Or less.*<sup>37</sup>

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<sup>37</sup> Nozick; Anarchy, State, and Utopia. p. 334



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